University of Central Lancashire
Training 2000

INFORMATION FOR EMPLOYERS

Apprenticeships

European Union
European Social Fund

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*

Part of the University of Central Lancashire

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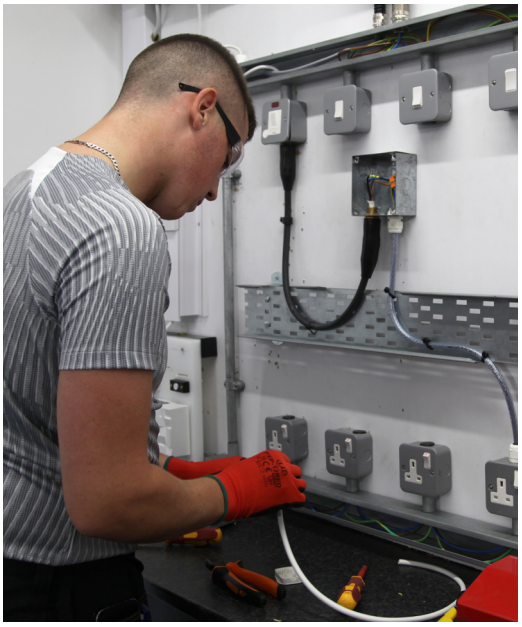
All prices correct at time of going to print.

Engineering and Advanced Manufacturing

Apprenticeship information

We deliver an extensive range of accredited courses in Technical Services, Electrical & Mechanical Maintenance, Welding & Fabrication, Manufacturing Processes and can develop bespoke skills improvement programmes to meet your specific requirements.



Commitment: Your 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.

Duration: Some of our Apprenticeships give you the option to have your apprentice based at Training 2000 in Blackburn full time for their first year. Full time at Training 2000 could be for a minimum of 6 months to a maximum of 12 months.

If you choose block training in year 1, this could take between 12 and 18 months to complete.

LEVEL 2 APPRENTICESHIP

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)

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:

- Welding safety
- Welding documentation and data
- Quality standards
- Plan and prepare welding activities
- Setting up equipment Identifying issues
- Welding components Inspect welds produced for dimensional and surface weld quality to ensure compliance prior to release
- Stages of welding activity Restore the work area and equipment to a safe and reliable condition
- Ensure tools, consumables, unused materials and equipment are returned to a safe, clean and approved condition on completion of welding work

Coded welder: After 12 months a test piece will be submitted for inspection to an external organisation and if successful the apprentice will be coded to ISO-9606 or BS-4872.

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

LEVEL 2 APPRENTICESHIP

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: Professional discussion underpinned by portfolio of evidence

LEVEL 3 APPRENTICESHIP

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.

Funding your Apprenticeship:

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

Pathways:

- Electrical
- Mechanical

Topics covered:

- Interpreting and following drawings or diagrams or specifications for required component or assembly
- Planning work activity, including resources, equipment and tooling.
- Producing individual components, for example keys, pipework, threading, wiring looms, interfacing parts, motors, wiring cables.
- Re-furbishing components
- Assembling components to produce equipment, machine or system - in full or part.
- Quality checking and adjusting components or assembly against required specification; for example testing and calibrating.
- Identifying and resolving problems with components or assembly; fault diagnosis.
- Handing over completed components or assembly, this may include storage and commissioning.
- Re-instating work area and equipment
- Contributing to continuous improvement in component production or assembly

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

Engineering Technician

Duration: Up to 4 years

Commitment: Year 1 - full time at Training 2000 OR x6 four to six 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.

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

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

Pathways:

Mechatronics Maintenance Technician

- Mathematical techniques
- Operating parameters
- Planning of maintenance activities
- Data and documentation
- Monitoring
- Planned maintenance
- Complex fault diagnosis
- Hand over of equipment
- Continuous improvement
- Health & Safety

Optional unit

- Maintaining mechanical equipment
- Maintaining fluid & pneumatic power equipment
- Maintaining electrical & electronic equipment
- Maintaining process control equipment
- Fluid power and process control

Toolmaker and Tool and Die Maintenance Technician

- Mathematical techniques
- Characteristics of common materials
- Hand tools
- Workshop machinery
- Set up and operate machinery
- Individual components/systems
- Application of systems
- Data and documentation
- Produce, assemble, disassemble
- Manufacture components
- Testing
- Preventative planned maintenance
- Fault diagnosis and repair activities
- Maintaining mechanical equipment
- Maintaining fluid & pneumatic power equipment
- Maintaining electrical & electronic equipment
- Maintaining process control equipment
- Continuous improvement

Technical Support Technician

- Health & Safety
- Data and documentation
- Working efficiently and effectively

Depending on your needs you will then choose one of two pathways:

- Pathway 1: Engineering drawing using computer aided techniques
- Pathway 2: Operational technical support

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

LEVEL 3 APPRENTICESHIP

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

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.

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:

- Work safely at all times complying with health and safety legislation, regulations, organisational and environmental requirements
- Plan and prepare for the metal fabrication activities before commencing work
- Check materials conform to the specified grades, dimensions and thicknesses identified on detailed engineering drawings
- Use the 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 and maintaining the equipment in a reliable and safe condition throughout
- Interpret technical drawings, patterns, templates and specifications to mark out, produce and assemble complex fabricated products to meet the required specification and quality requirements
- Use appropriate tools, equipment and techniques to shape and form (hot or cold) metal materials, demonstrating and applying knowledge of material properties and characteristics throughout
- Monitor resources and activities throughout the fabrication of products or components, identifying areas for improving the production process where possible
- Cutting, drilling, shaping and preparing metal materials during fabrication activities using manual and power tools, thermal and laser cutting, as required calculating dimensions and tolerances using knowledge of mathematics and instruments/equipment
- Operate appropriate tools and equipment to join metal parts using a range of mechanical fasteners and fixing techniques required by the specifications appropriate to the fabrication activity being carried out and in accordance with approved joining procedures and quality requirements
- Operate joining equipment to join metal parts using a range of appropriate techniques to the standards required by the specifications for the fabrication activity being carried out
- Inspect and test joins for security against required standard
- Carry out quality checks on component parts and completed assemblies
- Deal with problems that occur within the fabrication activity in line with responsibilities of the role
- Restore the work area and equipment to a safe and reliable condition on completion of the activity
- Complete documentation at the appropriate stages of the work activity
- Weld joints in accordance with approved welding procedures and quality requirements

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

LEVEL 3 APPRENTICESHIP

Machining Technician

Duration: Up to 4 years

Commitment: Year 1- Full time at Training 2000 (for a min of 6 months to a maximum of 12 months) or x5 blocks plus a day per week for the Technical Certificate

Blocks:

- Milling (5 weeks)
- Turning (5 weeks)
- Fitting (6 weeks)
- CNC turning* (upto 4 weeks)
- CNC milling* (upto 4 weeks)
- optional blocks available at 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:

- Conduct safety checks and performance monitoring for machining, associated equipment and surrounding work area.
- Receive, read and interpret engineering data and documentation, engineering drawings and technical data. Contribute to or plan the days machining schedule.
- Check and inspect materials to be machined to ensure that they conform to quality standards. Identify and report any issues or faults such as incorrect grades, dimensions and thicknesses.
- Plan and prepare sequence for the machining activities. Ensure that the correct tooling, work holding, and materials are used. This applies to conventional complex or CNC complex machining tasks.
- Set up, operate, or adjust conventional machines or set up, prove and validate CNC machining equipment settings and programs for the machine tool being used.
- Machine high-quality complex components using a broad range of processes. For example, internal or external thread cutting, slots and pockets, internal or external under cutting. Also profile forms, tapered and eccentric diameters, bored holes, and tee slots.
- Inspect components produced. Adjust the machining equipment or program and tooling to ensure components meet quality requirements.
- Identify, communicate and report issues affecting machining component quality, quantity and deadlines.
- Complete machining documentation at all stages of the work activity. For example, standard operational procedures, control documentation and contribution to audits.
- Maintain and restore the machining work area, performing housekeeping and waste management as appropriate. Ensure tools, unused materials and equipment are returned to a safe, clean and approved condition on completion of machining work.
- Keep stakeholders for example, customers, colleagues and line managers informed about machining work.
- Perform scheduled daily inspection and machine shut down or safe isolation.
- Support continuous improvement activity to address business problems.

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

* Training 2000 certified

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)

LEVEL 5 HIGHER NATIONAL DIPLOMA

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

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