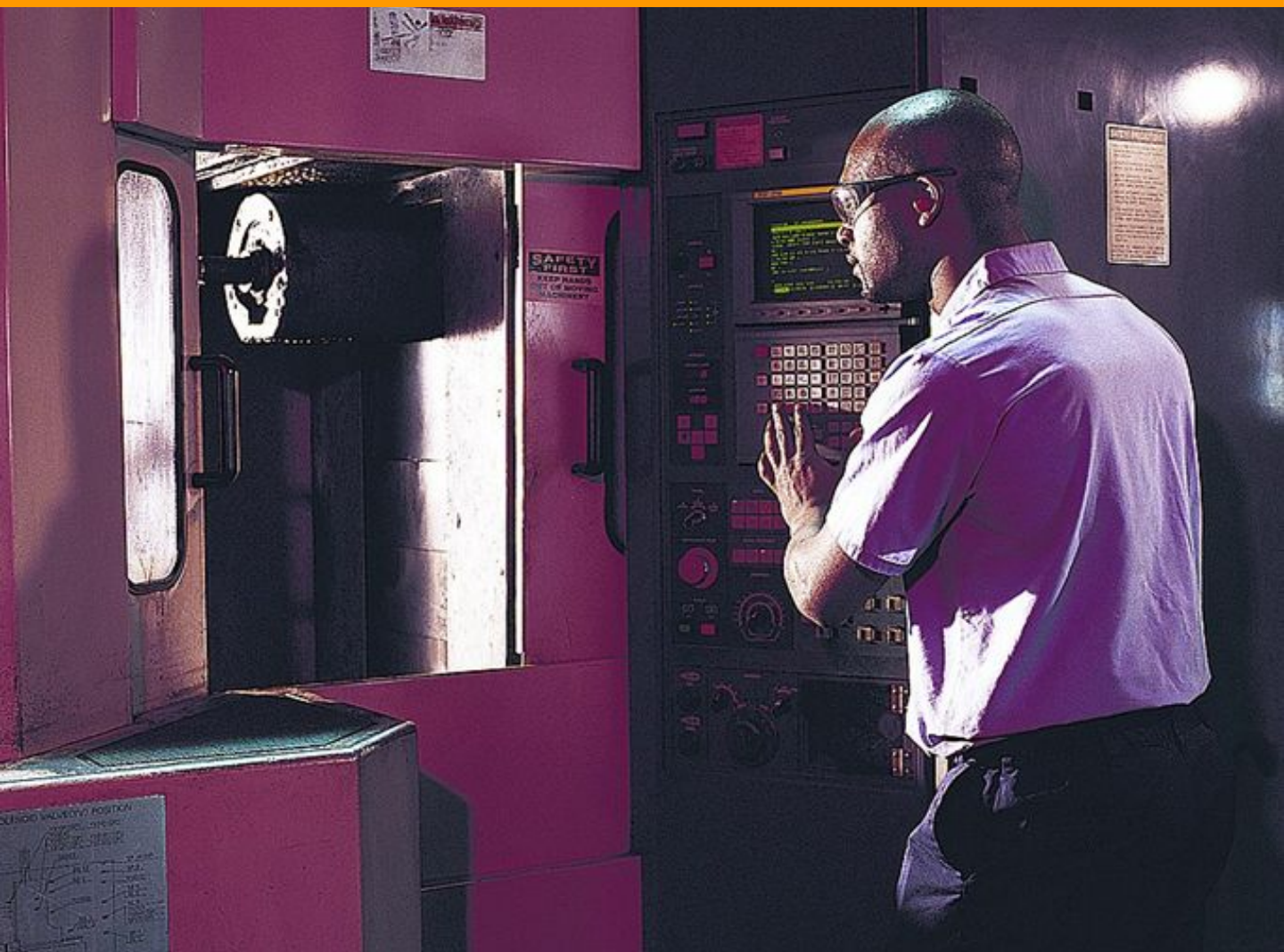


# WOODS-TEC

Industrial Training Solutions



## Course Brochure 2025

[woods-tec.co.uk](http://woods-tec.co.uk)

# Why choose WOODS-TEC

At WOODS-TEC, we deliver high-quality, industry-focused training designed to empower engineers and technicians with the practical skills they need to excel in the workplace.

## **Here's why we stand out:**

**Industry Expertise** – Our training is delivered by professionals with hands-on experience across multiple industries, ensuring real-world relevance.

**Comprehensive Training** – From automation and machining to electrical and safety training, we offer a wide range of courses tailored to meet the demands of modern engineering.

**Flexible Delivery** – We provide training on-site, or at an agreed offsite location using yours or our equipment, depending on your requirements.

**Practical Focus** – Our courses emphasize hands-on learning, enabling trainees to develop real skills that they can immediately apply within the workplace.

**Invest in the future of your workforce with WOODS-TEC Industrial Training Solutions.**



# **Our Core Values**

## **Safety First**

We prioritise creating safe environments for all clients and their employees. By adhering to industry best practices and rigorous safety standards, we ensure every project is executed with the utmost care and attention.

## **Positive Impact**

We are dedicated to delivering a positive impact within all our clients' businesses, by providing quality training solutions that prioritise the minimisation of downtime, ensuring seamless operations and sustained growth.

## **Empowering People**

We believe in developing skills and sharing knowledge to strengthen teams. By providing training, guidance, and mentorship, we help individuals and businesses grow together.

## **Smart, Flexible Training**

All of our courses are designed with flexibility at the forefront to meet the operational needs of your business. Training sessions can be scheduled anytime between 6:00 AM and 9:00 PM, with daily durations ranging from 6 to 12 hours. Whether you prefer shorter sessions spread across multiple days or intensive full-day training blocks, we'll tailor the delivery to minimise disruption and maximise efficiency.

## **Minimised Downtime**

Our small group sizes not only create a more engaging and personalised learning experience, but also help reduce the number of employees away on training at one time-keeping your operations running smoothly. This focused approach ensures more interaction, better retention of material, and increased relevance to each participant's role.

## **Onsite Training**

To make training even more accessible, we offer onsite delivery at your premises. This eliminates the need for employees to travel offsite, significantly reducing associated costs such as fuel, accommodation, and lost productivity. By bringing the training to you, we help your team stay closer to the job while still gaining the skills they need to excel.

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# Safety Courses



# Safety In The Use Of Abrasive Wheels

This comprehensive course is designed for all personnel involved in the selection, mounting, and safe operation of abrasive wheels. It ensures compliance with The Provision and Use of Work Equipment Regulations 1998 (PUWER) and aligns with the latest HSE Guidance Note 17 – Safety in the Use of Abrasive Wheels.

The training covers both theoretical principles and practical applications, equipping participants with the knowledge and skills to safely mount and manage abrasive wheels in the workplace. By the end of the course, delegates will have a thorough understanding of hazard identification, risk reduction, and best practices for maintaining a safe working environment.

## Course Contents:

- Introduction
- Abrasive wheel characteristics
- Safety
- The grinding machine
- Mounting of abrasive wheels
- Guards
- Portable and hand-held grinding machines
- Operation of abrasive wheels
- Personal protective equipment

## Details:

No prerequisites

Duration: 8 hrs

# Safe Use Of Ladders & Stepladders

This essential course provides comprehensive guidance on the safe and effective use of ladders and stepladders in the workplace. It equips participants with the knowledge to assess risks, implement best practices, and take necessary precautions to prevent accidents.

Designed to support compliance with the Work at Height Regulations 2005 (WAHR), this training ensures that employers and employees understand their responsibilities when working at heights. Through a combination of theory and practical instruction, delegates will gain the confidence to use ladders safely while minimizing workplace risks.

## Course Contents:

- Introduction
- When a ladder is the most suitable piece of equipment
- Who can use a ladder at work
- Pre-use checks and condition
- Using a ladder safely
- Options for securing ladders
- Ladders used for access

## Details:

No prerequisites

Duration: 8 hrs



# Manual Handling

This comprehensive course is designed for all employees involved in manual handling tasks, providing essential knowledge and practical skills to minimize the risk of injury. It ensures compliance with the Manual Handling Operations Regulations 1992 and follows the latest HSE Guidance (L23) on safe manual handling practices.

The training covers both theoretical principles and hands-on techniques, equipping participants with the skills to assess risks, apply proper lifting methods, and implement best practices to enhance workplace safety and efficiency.

## Course Contents:

PART 1 Manual Handling Operations Regulations 1992: Legal duties

PART 2 Carrying out a manual handling risk assessment

PART 3 Assessing and reducing manual handling risks

PART 4 Mechanical assistance and good handling technique

## Details:

No prerequisites

Duration: 8 hrs

# Safety & Skills Assessments



Our comprehensive safety and skills assessments enable employers to identify training needs and validate the competence of both existing and prospective staff. This process is crucial in maintaining a safe workplace and ensuring that personnel are fully equipped to operate essential workshop and processing equipment.

## Assessment Coverage Includes:

- Lathes
- Milling Machines
- Surface Grinders
- Power and Hand Tools
- Industrial Electrical Systems
- PLCs
- Automated Systems

Customized assessment packages are also available to tailor the evaluation to your specific operational requirements.

## Details:

No prerequisites

Duration: 8 hrs



# Automation & Maintenance Courses



# Introduction to Electronic Systems

This course is designed to provide engineers with a solid understanding of fundamental electronic principles and components. It serves as a foundation for further study and application in electrical and electronic systems across a wide range of industries.

By the end of the course, participants will have developed essential core knowledge that underpins the operation, design, and troubleshooting of modern electrical systems.

## Course Contents:

- Safety
- Electronics Tool Kit
- Schematics
- Electrical Supplies
- Ohm's Law
- Power Calculation
- Series & Parallel circuits
- Resistors
- Potentiometers
- Capacitors
- Coils
- Diodes
- Transistors
- Integrated Circuits
- Taking Readings
- Introduction to microcontrollers

## Details:

No prerequisites

Duration: 24 hrs



# Industrial Electrical Systems Training

This course is designed to give engineers a deeper understanding of industrial electrical systems, focusing on their structure, function, and maintenance. It combines theoretical knowledge with practical insights to build real-world competence.

Upon completion, delegates will be better equipped to perform maintenance, implement improvements, and accurately diagnose faults in a wide range of industrial electrical environments.

## Course Contents:

- Electrical safety
- Typical industrial electrical components
- Interpretation of electrical schematics
- Power and control circuits
- Traditional motor control
- Inverter drive history
- Wiring to an Inverter Drive
- Inverter drive theory (how it works)
- Setting parameters on an inverter drive
- Analog signals with inverter drives
- Test equipment
- Dead tests
- Fault finding and rectification
- Circuit design

## Details:

No prerequisites

Duration: 24 hrs

# Programmable Logic Control (PLC)

This comprehensive course provides engineers with a solid foundation in PLC systems, progressing from basic principles to more advanced functions and applications. It is designed to build both confidence and competence in working with industrial automation equipment.

Upon completion, participants will be able to carry out effective maintenance, troubleshoot and resolve faults, implement system improvements, and contribute to the development of new automated solutions within the workplace.

## Course Contents:

- History
- Theory of operation
- Connecting the hardware
- Creating a project
- Establishing online connections
- Configuration of hardware
- I/O tagging, monitoring and forcing
- Boolean logic
- Program representation (LAD, FBD)
- Program structure and standards
- Basic instructions (timers and counters)
- Wiring to a PLC

## Course Contents:

- Data blocks
- Data types and parameter types
- Local and global variables
- Analogue I/O
- Step programming
- Setting up a HMI
- Connections over a network
- Web based communication
- Downloading and monitoring an existing program from the device
- Backing up the system
- Fault finding using software
- Monitor and modify variables
- Program modification

## Details:

No prerequisites | Duration: 24 hrs



# Machinist Courses



# Fundamentals of Milling & Turning

**This hands-on course introduces the core principles and practical skills required to safely and effectively operate both milling and turning machines. It is ideal for those new to machining or looking to build a strong foundation in traditional manufacturing processes.**

**Participants will learn about machine safety, setup procedures, tool selection, basic operations, and the essential techniques used to produce accurate components on both milling and turning equipment.**

## Course Contents:

- Machine safety
- Machine controls and operation
- Common types of cutters
- Speed and feed calculations
- Tool setting
- Workpiece setting (machine vice)
- Working from datums
- Blocking up
- Producing slots
- Drilling holes to depth
- Centre drills
- Producing threads
- Milling angles
- Setting work three jaw chuck
- Using the tailstock
- Turning steps and shoulders

## Details:

No prerequisites

Duration: 24 hrs



# Milling (Part 1)

This introductory course focuses on the essential skills engineers need to confidently and safely operate milling machines. It covers the most commonly used techniques and practices, enabling participants to produce a wider variety of machined components.

Topics include machine setup, tool selection, material handling, and accurate workholding methods, laying the groundwork for more advanced milling operations.

## Course Contents:

- Machine controls and operation
- Types of milling cutters
- Basic material types
- Speed and feed calculations
- Tool setting
- Workpiece setting ( machine vice, table, angle plate)
- Working from datums
- Blocking up
- Producing steps and slots
- Drilling holes
- Drilling to depth
- Centre drills
- Reaming

## Course Contents:

- Producing threads tap and die method
- Milling angles

## Details:

No prerequisites | Duration: 24 hrs

# Milling (Part 2)

Building on the fundamentals covered in Part 1, this course introduces additional techniques to expand an engineer's capability on milling machines. It is ideal for those looking to apply more advanced processes tailored to specific work applications.

Participants will develop skills in specialised operations such as rotary and indexed machining, along with more advanced internal cutting techniques.

## Course Contents:

- Using a dividing head
- Using a rotary table
- Boring

## Details:

Completion of part 2  
or relevant  
experience

Duration: 16 hrs



# Turning (Part 1)

This course focuses on the core turning techniques engineers need to safely and effectively operate a lathe. It covers the most commonly used skills, enabling participants to produce a broader range of precision components.

Delegates will gain hands-on experience in machine setup, tool selection, chuck and centre work, and essential turning operations forming a solid foundation for further development in machining.

## Course Contents:

- Machine controls and operation
- Types of turning tools
- Speed and feed calculations
- Tool setting
- Working from datums
- Setting work three jaw chuck
- Using the tailstock
- Setting work four jaw chuck
- Turning between centers
- Boring

## Course Contents:

- Drilling holes
- Drilling to depth
- Centre drills
- Reaming
- Producing threads tap and die method
- Compound slide alignment for producing angles
- Form tools
- Turning steps and shoulders

## Details:

No prerequisites | Duration: 24 hrs

# Turning (Part 2)

This advanced course builds on the techniques learned in Part 1, introducing additional skills tailored to more specific or complex work applications. It is ideal for engineers looking to expand their capabilities in precision turning.

Key topics include precision screw cutting and aligning the tailstock for producing accurate angles-enhancing versatility and confidence when working on specialised components.

## Course Contents:

Screw cutting  
Tailstock alignment for producing angles

## Details:

Completion of part 1  
or relevant  
experience

Duration: 16 hrs



# Surface Grinding

This course covers the essential skills needed to operate surface grinding equipment safely and effectively. It is ideal for engineers looking to broaden their capabilities and produce a wider range of precision-ground components.

The training includes key topics such as machine operation, wheel selection and dressing, accurate workholding, and foundational grinding techniques. It also incorporates the full “Safety in the Use of Abrasive Wheels” module to ensure full compliance with safety standards.

## Course Contents:

- Surface grinder safety (Includes “Safety in the use of abrasive wheels” course)
- Machine controls and operation
- Basic material types
- Wheel mounting and dressing
- Workpiece setting ( machine vice, table, angle plate)
- Working from datums
- Grinding square
- Producing steps and slots
- Grinding angles
- Form and radius grinding

## Details:

No prerequisites

Duration: 30 hrs

# Fundamentals of CNC Milling & Turning

This intermediate-level course provides a comprehensive introduction to CNC milling and turning, combining theoretical knowledge with practical experience. Designed for engineers looking to transition from manual to automated machining, it covers everything from fundamental principles to hands-on programming and operation.

## Course Contents:

- Basics of CNC and its advantages over manual machining
- Applications of CNC in various industries
- Overview of CNC machine types
- Key machine components and structure (bed, spindle, tool changer, axes)
- Introduction to workholding devices
- Common cutting tools
- Tool compensation
- Workpiece coordinate system

## Course Contents:

- Introduction to programming
- Safe machine operation
- Powering up and homing
- Dry running
- Safe methods for loading and changing tools
- Speeds and feeds
- Basic CNC maintenance and fault-finding techniques

## Details:

No prerequisites | Duration: 30 hrs



# CNC Milling

This hands-on course is designed to give engineers a solid understanding of CNC milling, combining key theoretical knowledge with practical application. It covers the full process—from programming and setup to safe operation and troubleshooting—in an industrial environment.

Participants will learn G-code programming, Fusion 360 CAM, machine setup, tooling, and workholding, gaining the skills required to confidently operate CNC milling machines.

## Course Contents:

- Basics of CNC milling and its advantages over manual machining
- Industrial applications of CNC Milling
- Main components of a CNC Mill
- Workholding devices (vises, fixtures, clamps)
- Tooling and cutting tools
- Tool compensation
- Workpiece coordinate system
- G & M-Code programming
- Structure of CNC programs
- Subprograms

## Course Contents:

- CAD/CAM Integration
- Machine Operation & Safety
- Powering up and homing the machine
- Dry runs and proving out programs
- Loading and changing tools safely
- Speeds and Feeds
- Tool selection
- Basic CNC Maintenance and troubleshooting

## Details:

No prerequisites | Duration: 30 hrs

# CNC Turning

This intermediate course offers a thorough introduction to CNC turning, combining core theory with hands-on machine operation. It's ideal for engineers looking to build confidence and competence in programming, setting up, and running CNC lathes within an industrial setting.

The course covers G-code programming, Fusion 360 CAM, machine structure, tooling, workholding, and safety procedures—equipping participants with the practical skills needed to produce precision-turned components.

## Course Contents:

- Basics of CNC Lathes and their advantages
- Industry applications of CNC turning
- Main components of a CNC Lathe
- Lathe workholding methods such as chucks and collets
- Turning tools and cutting inserts
- Tool offsets and compensation principles
- Understanding the workpiece coordinate system
- Introduction to G-Code and M-Code for CNC turning

## Course Contents:

- Program structure
- Canned cycles and subprograms
- Introduction to CAD/CAM using Fusion 360
- Safe machine operation
- Powering up and homing
- Running dry tests and verifying programs
- Safe handling and changing of lathe tools
- Setting appropriate cutting speeds and feeds
- Tool selection
- Basic maintenance and troubleshooting

## Details:

No prerequisites | Duration: 30 hrs



# Workshop Courses



# General Workshop Equipment Training

This practical course provides engineers with the core skills required to safely and effectively use a range of common workshop equipment. It is ideal for those looking to expand their hands-on capabilities and produce a broader variety of work.

Key areas include workshop safety, the use of drilling machines and power tools, marking out techniques, tool sharpening, and accurate material preparation—laying a strong foundation for safe and efficient workshop practices.

## Course Contents:

- Workshop safety
- Drilling machines
- Datums
- Drill grinding
- Speeds and feeds
- Use of templates
- Marking out
- Filing
- Power saws
- Angle grinders
- Bench grinders
- Linisher
- Hammers
- Punches
- Screwdrivers
- Spanners
- Hand saws (various types)
- Pliers
- Grips

## Details:

No prerequisites

Duration: 30 hrs

# Measurement Techniques & Engineering Drawing

This course equips engineers with the essential skills to interpret technical documentation and verify that components meet specified requirements. It combines practical use of precision measuring tools with an understanding of technical standards and inspection techniques.

## Course Contents:

- Working from datums
- Engineer's rule
- Micrometers
- Vernier callipers
- Engineer's combination set
- Slip blocks
- Marking out
- Conversion factors
- Using dial test indicators
- Measuring using Vernier height gauge
- Using a shadowgraph

## Course Contents:

- Introduction to BS8888
- Reading engineering drawings
- Drawing projections
- Part drawings
- Assembly drawings
- Line types
- Symbols
- Drawing abbreviations
- Surface finishes
- Geometric dimensioning and tolerances

## Details:

No prerequisites | Duration: 24 hrs



# 3D Modelling & Additive Manufacturing (FDM)

This course is designed to give engineers the practical skills to create 3D models using CAD software and bring them to life through Fused Deposition Modelling (FDM) techniques. It's ideal for those looking to develop digital design capabilities and gain hands-on experience with 3D printing technology.

## Course Contents:

- Fusion 360 User Interface
- Introduction to different planes
- Sketching
- BS 8888
- Extruding
- Filleting and chamfers
- Patterning and revolving features
- Adding holes & slots
- Mirroring features
- Editing 3D parts and assemblies
- Assigning material and appearance to parts
- Creating 2D drawings from parts and assemblies

## Course Contents:

- Additive manufacturing methods & materials
- Working safely with FDM equipment
- Fused deposition modelling (FDM)
- FDM Materials
- Designing a component for FDM production
- Optimal Design
- Reverse Engineering & 3D Scanning
- FDM printer care and maintenance

## Details:

No prerequisites | Duration: 24 hrs

# Enquires & Delivery Options



# Progression

Course Progression	Maintenance Engineer	Field Service Engineer	Controls Technician	Systems Integrator	Assembly Line Worker	Production Operator	Setter/Operator	Manual Machinist	CNC Programmer	Toolmaker	Quality Control Inspector	CAD Technician	Design Engineer
Safety & Skills Assessment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Manual Handling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Safe Use Of Ladders & Step Ladders	✓	✓	✓	✓									
Safety In The Use Of Abrasive Wheels	✓	✓					✓	✓	✓	✓			
General Workshop Machines & Hand Tools	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Measurement Techniques & Engineering Drawing					✓	✓	✓	✓	✓	✓	✓	✓	✓
3D Design & Additive Manufacture	✓	✓	✓	✓				✓	✓	✓		✓	✓
Combined Milling & Turning	✓						✓	✓	✓	✓			
Turning (Parts 1-2)								✓	✓	✓			
Milling (Parts 1-2)								✓	✓	✓			
Surface Grinding								✓	✓	✓			
CNC Combined Milling & Turning								✓	✓	✓			
CNC Turning								✓	✓	✓			
CNC Milling								✓	✓	✓			
Electronics	✓	✓	✓	✓									
Industrial Electrical	✓	✓	✓	✓									
Programmable Logic Control	✓	✓	✓	✓									



# How to Book a Course

- A member of our sales team will then reach out to confirm your booking and arrange a suitable time and date for the training session.

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Please visit [www.woods-tec.co.uk](http://www.woods-tec.co.uk)

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