WOODS-TEC

Engineering Training Solutions

Course Brochure 2026

woods-tec.co.uk

Contents

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

Why Core Values Matter at WOODS-TEC

Core values are the personality of an organisation. They shape how we think, act, and support one another. At WOODS-TEC, these values aren't just words on a wall—they're the standards we live by. We believe that every person within our organisation should uphold these principles in everything they do.

At WOODS-TEC we are always ready to **S.E.R.V.E**

Safety

Prioritise safety in everything you do. Challenge unsafe norms, and always look for ways to make things safer.

Engage

Be ready to help, lead, and support, When challenges arise, don't wait, take action.

Responsibility

Be honest, stay accountable, and act with integrity, especially when no one's watching.

Value

Every action should matter. If it doesn't add value for the individual, the organisation, or society, it's not worth doing.

Excellence

Approach every task, no matter how small, with unwavering commitment to quality and care. Strive to deliver your very best, every time.

Safety Courses

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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.

Details

No prerequisites

Duration: 8 hrs

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

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Safe Use Of Ladders & Stopladders

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

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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

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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:
Practical 4 hrs
Test 1.5hrs

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Maintenance Courses

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Mechanical Maintenance

This course is designed to provide delegates with a clear understanding of the common mechanical components found across a wide range of equipment. It establishes a practical foundation for further study and application in mechanical systems within diverse industrial settings.

By the end of the course, participants will have developed the skills to dismantle and reassemble equipment correctly and efficiently, while inspecting components for wear and damage. They will also appreciate the importance of proper training in ensuring the safe and reliable operation of plant and equipment, all of which rely on mechanical components in one form or another.

Course Contents:

- Safety
- Dismantling and assembly techniques.
- Gear types and uses.
- Seals & Gaskets.
- Bearing types and uses.
- Removal & refitting of bearings.
- Driveshafts
- Couplings
- Keys and keyways
- Chain drive systems
- Belt drive systems
- Mechanical fixings

Details

No prerequisites

Duration: 24 hrs

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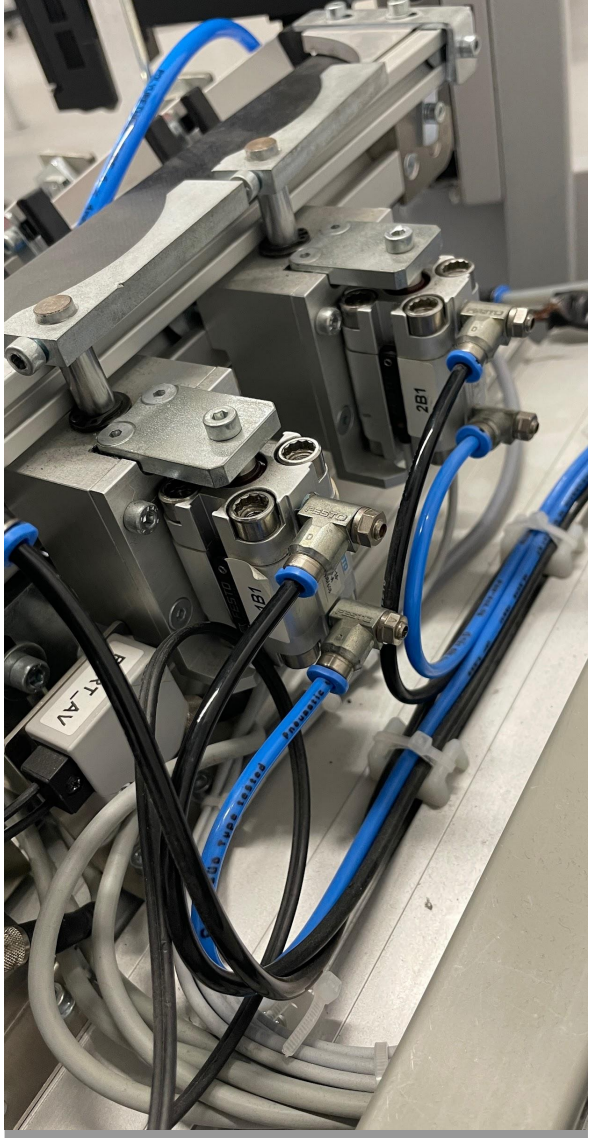

Fluid power systems

This intensive course is the perfect starting point for anyone new to pneumatic systems.

Delegates gain hands-on skills to read schematics, design, install, and test pneumatic control panels with confidence.

With pneumatics driving many of today's industrial processes, correct maintenance is vital. Our programme shows you how to diagnose faults quickly and apply preventative strategies that keep systems running smoothly, reduce downtime, and extend service life.

Whether you're looking to build knowledge from the ground up or sharpen your maintenance expertise, this course delivers practical insights that make a real impact in the workplace..

Course Contents:

- Safety
- How to read pneumatic schematics
- Building pneumatic circuits from a schematic
- Pneumatic components and how they operate
- Maintenance techniques for fluid power systems
- Electro pneumatics
- PLC Taster

Details

No prerequisites

Duration: 24 hrs

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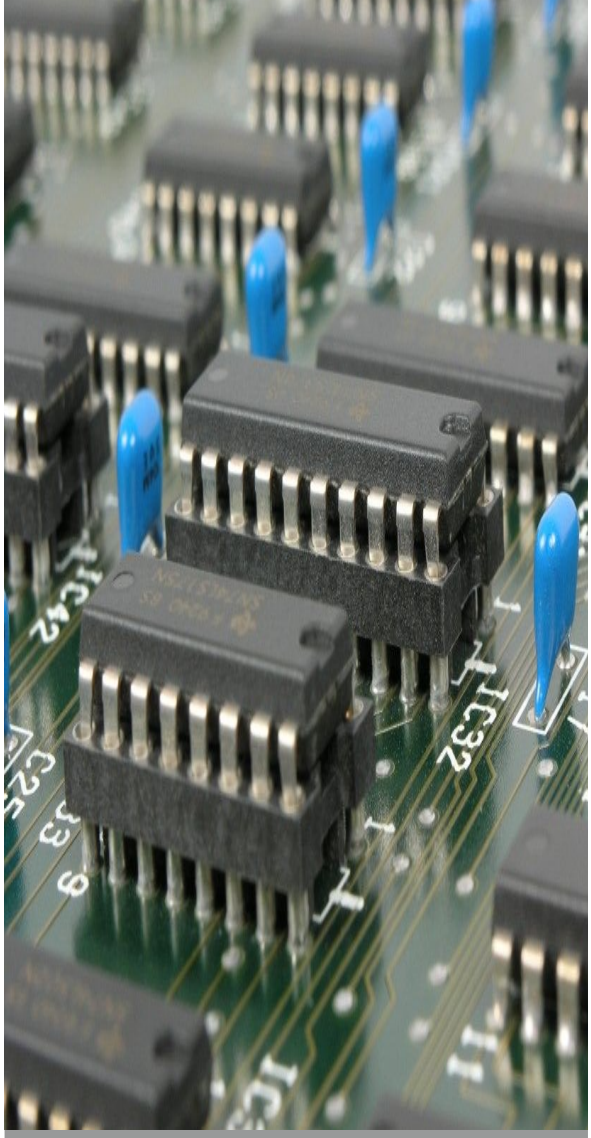

Introduction to Electronic Systems

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

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Electrical Installation for Industry.

This four-day intensive course is the ideal introduction for those with little or no prior experience in electrical installation.

Delegates will learn how to design, install, and test distribution circuits commonly used across industrial environments, building confidence through practical, hands-on training.

Because electrical distribution is central to every business, maintaining these systems correctly is vital. By upskilling your workforce, you'll gain multi-skilled personnel who are more productive, reduce reliance on contractors, and achieve significant cost savings while improving efficiency and minimising downtime.

Course Contents:

- Safety
- Ring circuits
- Radial circuits
- Lighting circuits
- 2-way lighting circuits
- Emergency lighting circuits
- PIR's
- Circuits to specific devices such as water heaters, showers, and cookers
- Working with conduit
- Working with trunking
- Working with cable tray
- Working with SWA cable
- Working with SY cable
- Circuit Design and calculation
- Basic testing and inspection

Details

No prerequisites

Duration: 24 hrs

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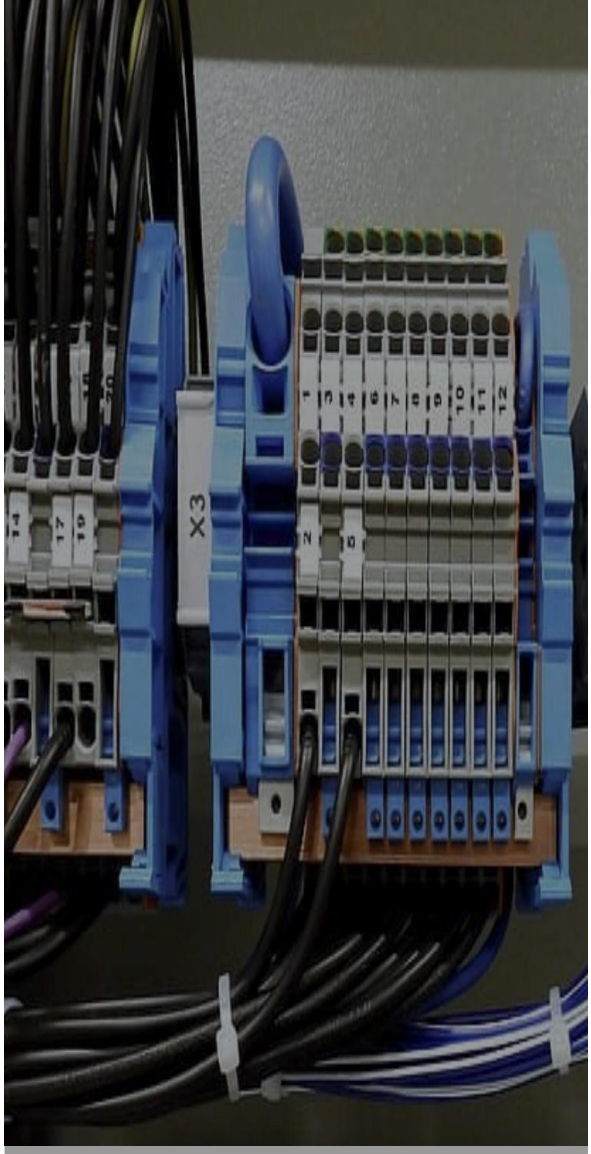

Industrial Electrical

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

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Automation Courses

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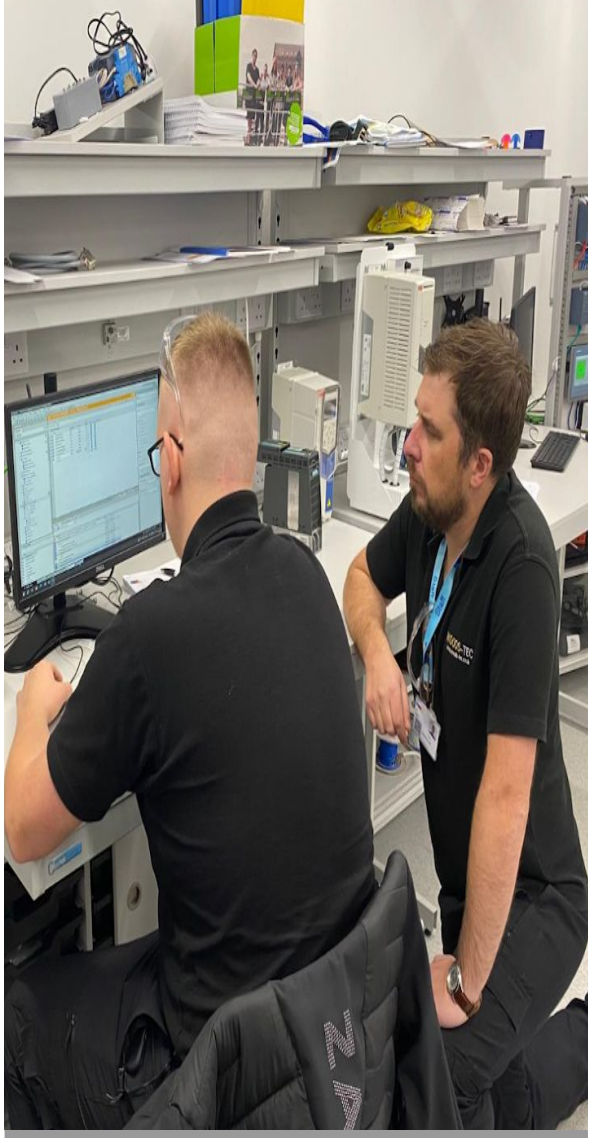

Programmable Logic Control

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
- Timers and counters
- Wiring to a PLC
- Data blocks
- Data types and parameter types
- Step programming
- Setting up a HMI
- Working with existing programs
- Backing up the system
- Fault finding using software

Details

No prerequisites

Duration: 24 hrs

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Robotics

This hands-on course introduces delegates to 6-axis industrial robots, teaching them how to programme robot cells via the teach pendant.

Ideal for businesses already using robotics or exploring automation, it equips your workforce with the skills and confidence to operate safely and effectively, unlocking new efficiencies and opportunities.

Course Contents:

- How Robots Work
- Robot jogging in axis & world mode.
- Programming with joint & Linear Motion
- Running & editing programs
- Tool & Base Calibration
- Creating subroutines
- Dealing with singularities
- Interfacing with other devices using the robot's inputs and outputs.
- Referencing and calibration of the robot

Details

No prerequisites

Duration: 24 hrs

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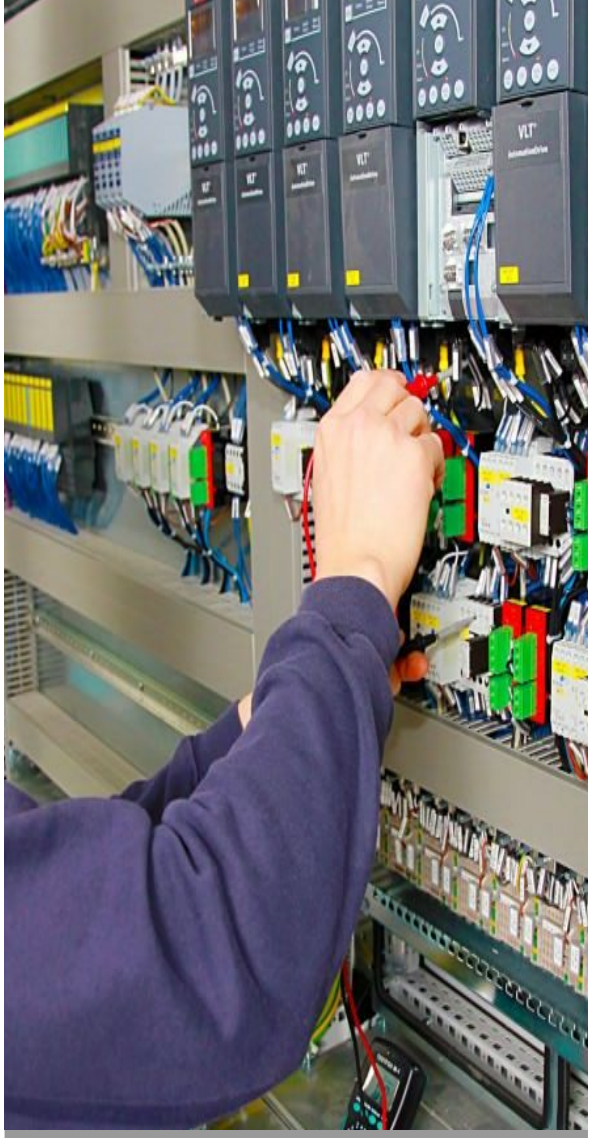

Fault finding on automated systems

This practical course equips your team to resolve equipment failures quickly using a logical fault-finding approach.

Delegates also gain the tools to prevent breakdowns through robust preventative maintenance and system analysis, reducing repeat issues and unplanned disruptions.

By predicting component wear and planning downtime effectively, your workforce will improve reliability, maintain productivity, and cut the costs associated with unexpected failures.

Course Contents:

- Safety refresher
- Sequence mapping
- Half split technique
- Six-point technique
- Five whys
- Flow charts.
- Preventive maintenance
- Condition based monitoring.
- Fault recording

Details

No prerequisites

Duration: 24 hrs

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Machinist Courses

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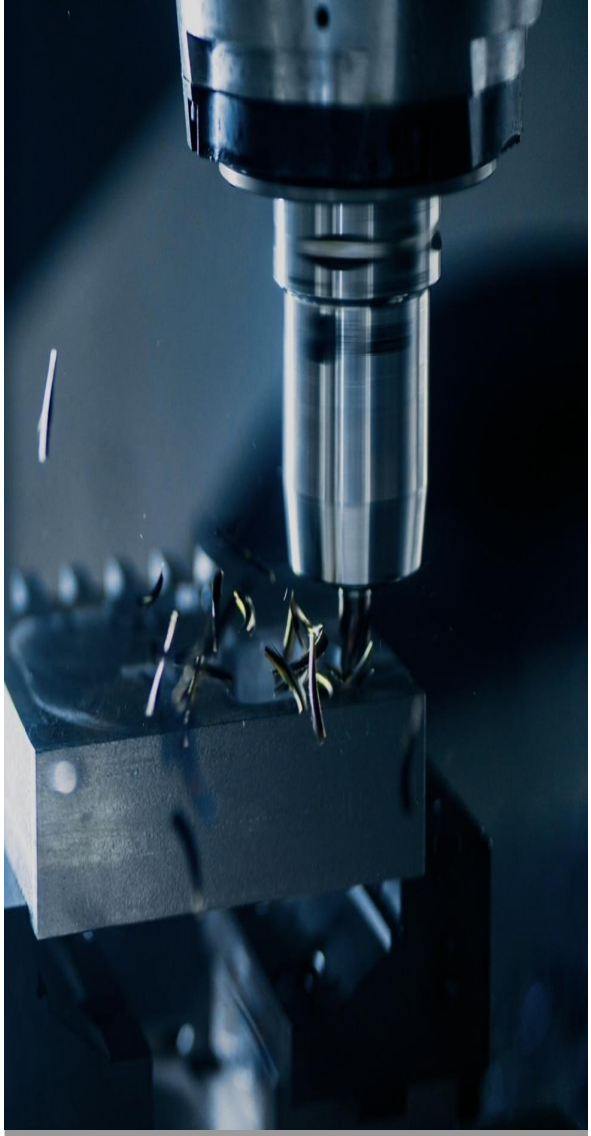

Fundamentals of Milling & Turning

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

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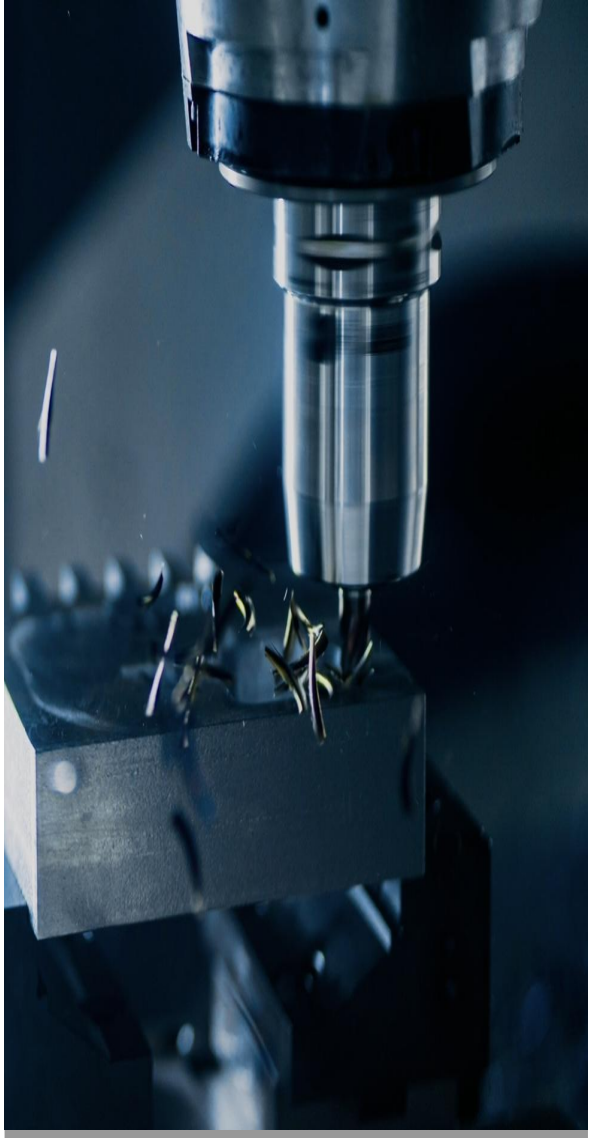

Milling (Part 1)

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
- Producing threads tap and die method
- Milling angles

Details

No prerequisites

Duration: 24 hrs

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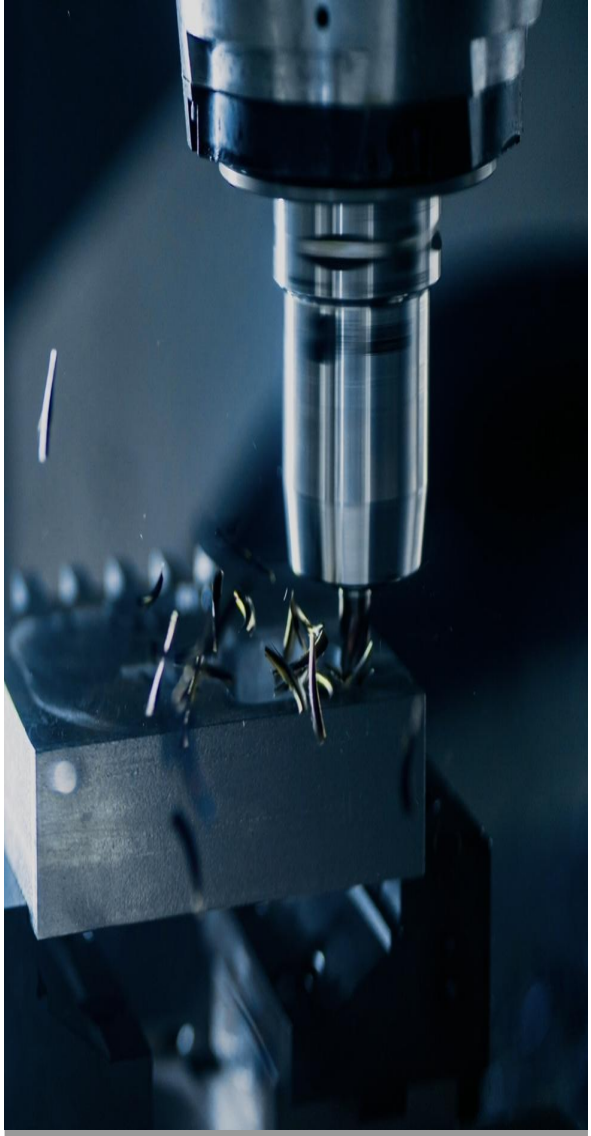

Milling (Part 2)

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

Prerequisites:
Completion of part 2 or relevant experience

Duration: 16 hrs

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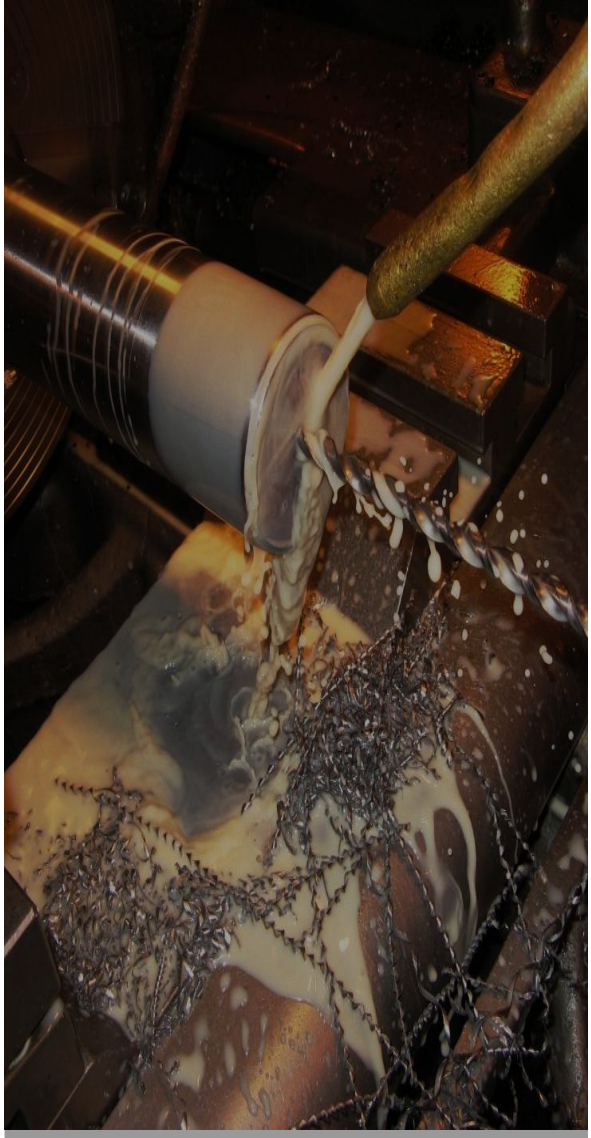

Turning (Part 1)

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
- 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

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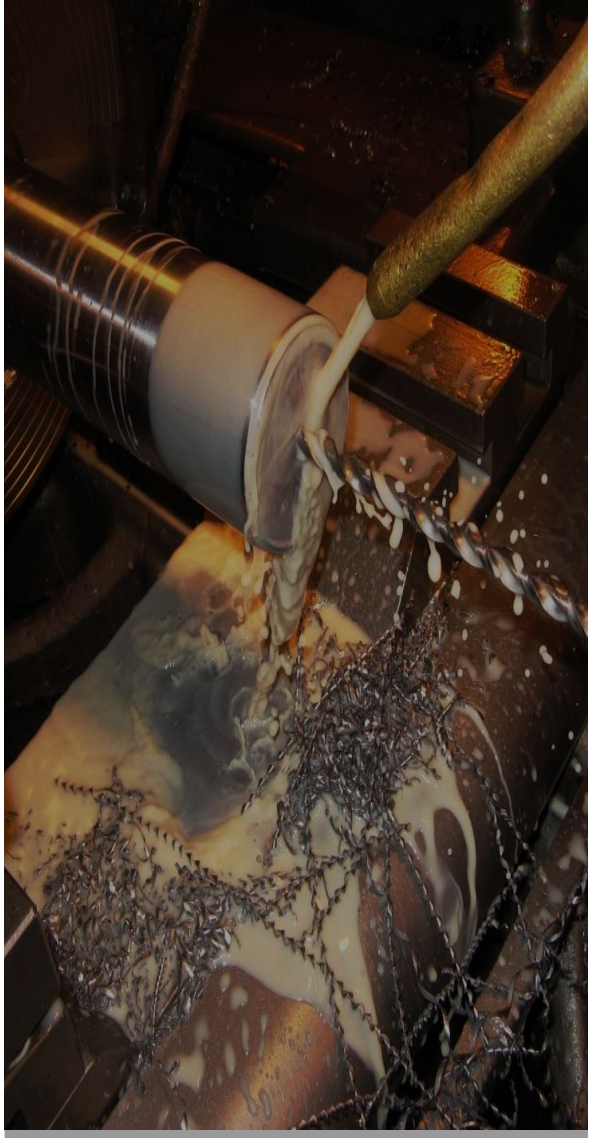

Turning (Part 2)

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

Prerequisites:
Completion of part 1 or relevant experience

Duration: 16 hrs

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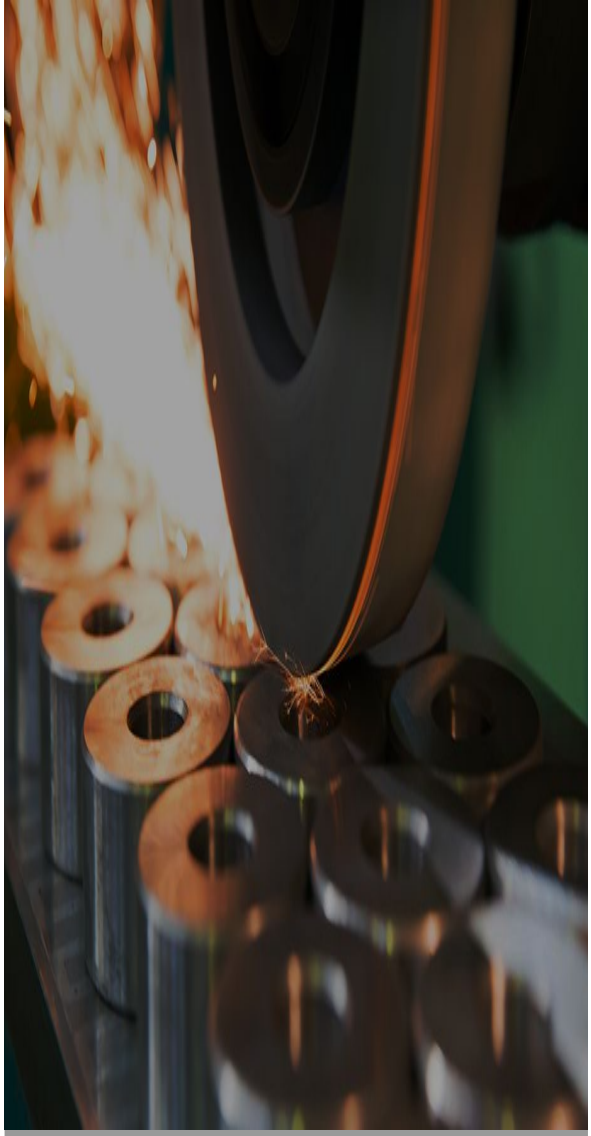

Surface Grinding

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

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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
- 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

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CAD/CAM for CNC Machining

This advanced-level course provides a comprehensive introduction to CNC machine setup using Autodesk Fusion 360 CAD/CAM. Combining theoretical knowledge with practical application, it is designed for engineers seeking to move from manual machining to fully integrated digital workflows. Participants will gain the skills to model, program, and prepare CNC milling and turning operations directly within Fusion 360, bridging the gap between design and machine execution.

Course Contents:

- CAD/CAM and its advantages over manual programming
- Applications of Fusion 360 in modern manufacturing
- Introduction to workholding devices and setup in CAM environment
- Common cutting tools and tool libraries in Fusion 360
- Tool compensation and offsets within CAM
- Workpiece coordinate systems and machine setup in Fusion 360
- Creating toolpaths: milling and turning strategies
- Simulation in Fusion 360
- Dry running and virtual simulation for error prevention
- Post-processing and G-code generation for CNC machines

Details

Prerequisites:
Completion of part 1 or relevant experience

Duration: 30 hrs

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Workshop Courses

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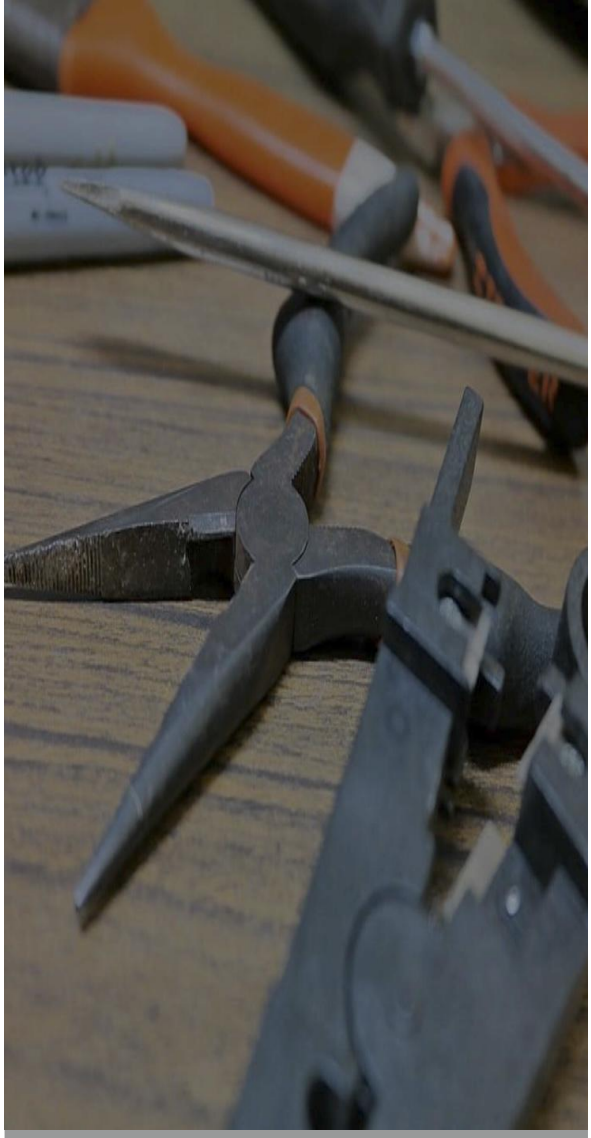

General Workshop Equipment Training

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

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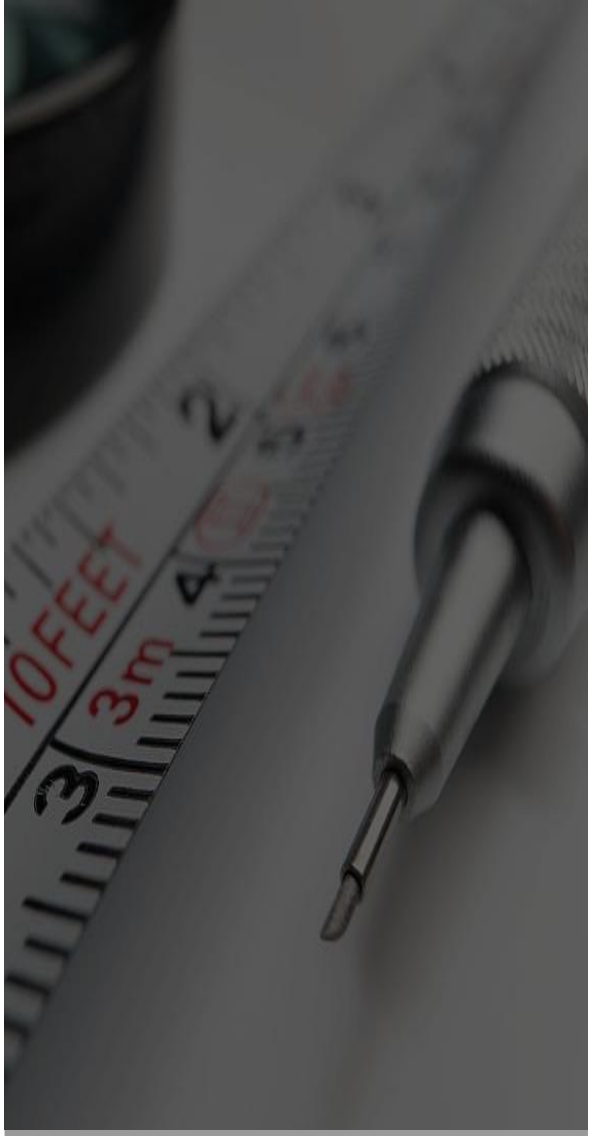

Measurement Techniques & Engineering Drawing

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
- Vernier height gauge
- Using a shadowgraph
- Introduction to BS8888
- Reading engineering drawings
- Drawing projections
- Part drawings
- Assembly drawings
- Line types
- Symbols
- Drawing abbreviations
- Surface finishes
- Dimensioning and tolerances

Details

No prerequisites

Duration: 24 hrs

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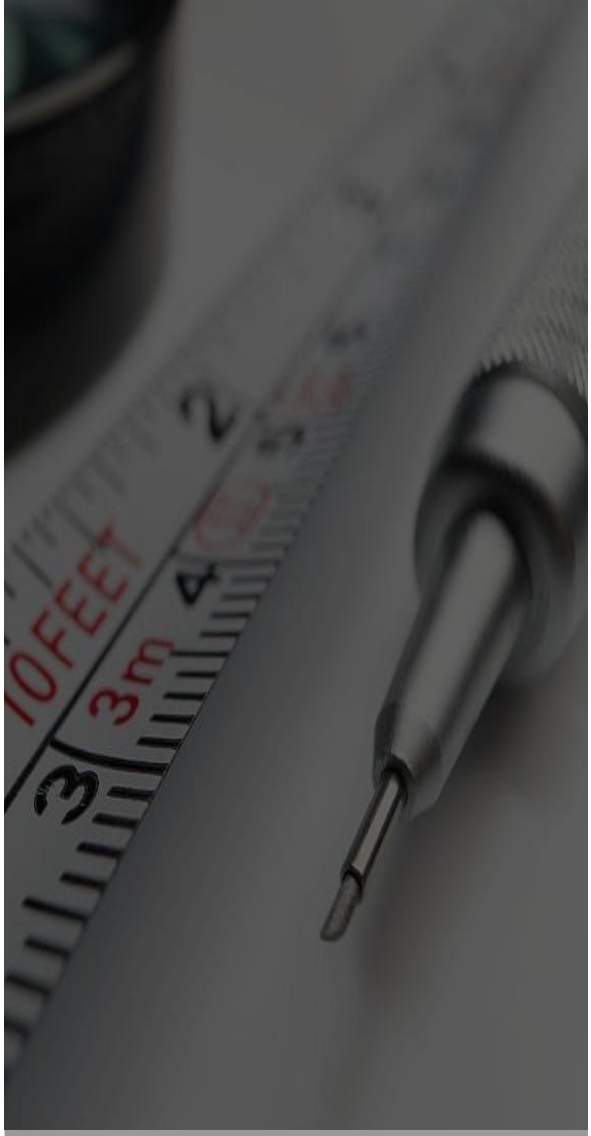

3D Modelling & Additive Manufacturing (FDM)

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 materials to parts
- Creating 2D drawings from parts and assemblies
- Additive manufacturing method
- Working safely with 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

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How to Book a Course

To book a course, please contact us via email at info@woods-tec.co.uk or call 07427 918-226, providing the following details:

- Course title(s) you wish to book
- Number of candidates
- Your email address and phone number
- Any specific questions or requirements regarding the training

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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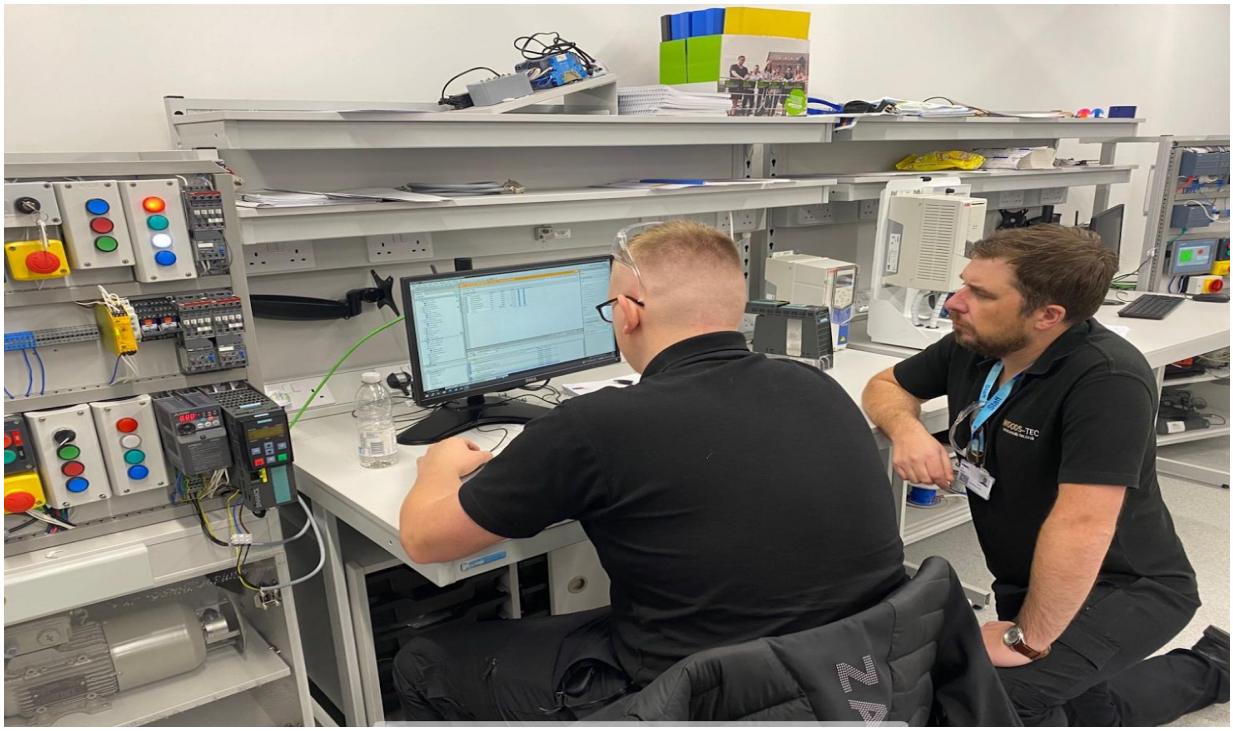

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