01.02.2027 - 04.02.2027

City & Guilds Mitsubishi GxWorks IMFFP® 1&2

Address / Contact: 7 & 8 Delta Bank Road, Gateshead, Tyne & Wear, NE11 9DJ

Description	This Beginner to Intermediate level training course is the first stage of the City & Guilds Assured Industrial Maintenance & Fault Finding Pro learning pathway through our training partner Scantime. Designed to equip you with the knowledge and skills to work confidently with the iQ-F/iQ-R range of programmable logic controllers or PLCs using GX Works3. The course takes participants from the fundamentals of PLC hardware and programming through to practical troubleshooting techniques and hardware fault resolution in an industrial setting. Participants will gain hands-on experience at their own dedicated training station with live PLCs, programming software and a customised workbook. The course includes two assessments, one per module, and on successful completion delegates receive two City & Guilds Assured certificates with digital credentials. It is ideal for maintenance engineers and technicians looking to reduce downtime and resolve faults with confidence.
Course target	By the end of the course, delegates should be competent in the following disciplines and demonstrate maintenance and troubleshooting skills including: • Identifying iQ-F/iQ-R hardware and understanding how PLC systems are constructed and expanded. • Understanding safety circuits and the role of safety standards in control systems. • Navigating GX Works3 and safely transferring programs to and from the PLC. • Reading and interpreting commonly used PLC instructions. • Using cross-references, device lists and diagnostics to locate faults. • Carrying out IO testing and making safe online program changes. • Diagnosing CPU faults and safely replacing batteries, IO cards and CPUs. • Applying best practice maintenance and fault finding techniques on live industrial systems.
Target group	This professional development experience has been designed for those individuals with little to no prior experience of PLCs, as well as experienced users who wish to revisit and solidify their understanding of iQ-F/iQ-R PLCs and GX Works3.
Agenda	Over a 4 day period delegates will cover the following modules and topics: • Introduction to PLCs and the iQ-F/iQ-R hardware range. • Number systems, memory areas, scan cycles and logic. • Safety circuits, safety PLCs and IEC safety standards. • GX Works3 project creation, hardware configuration and communications.

	• Labels, comments and basic programming routines. • Understanding Timers, counters, move, bit logic and set/reset instructions. • Program uploads, downloads, backups and online editing. • Structured data, Functions, Function Blocks and interrupts. • Troubleshooting with cross-references, device lists and diagnostics. • IO testing, forcing and verifying program changes. • CPU faults, battery replacement and IO card/CPU replacement. • Understanding maths, comparators, sequencers, cycle stops and alarm handling.
Duration	4 Days
Products and software	PLC
Participant fee	1800.00 GBP