



TRAFFORD
COLLEGE



STOCKPORT
COLLEGE

ENGINEERING – AUTOMATION AND CONTROLS TECHNICIAN

Level 4,
Apprenticeship Standard

ELIGIBILITY / ENTRY REQUIREMENTS

Typically 5 GCSEs at grade 5 or higher including maths, English and science, or equivalent and/ or relevant experience.

This occupation is found in cross sector (e.g. Automotive, Food & Drink, Oil & Gas, Pharmaceutical, Construction), companies involved in manufacturing (discrete or process), logistics or utilities environments. These employers may be directly involved in these activities or as a provider of services (e.g. systems integration, field service, technical consultancy) to these companies.

The broad purpose of the occupation is twofold.

Where the role is based inside a manufacturing (discrete or process), logistics or utilities environments, a fully competent Automation & Control Engineering Technician will be able to install, maintain, fault find and optimise hardware and software for automation systems.

Where the role is based in a service provider, OEM (Original Equipment Manufacturer) or approved solutions provider in large or SME (Small to Medium Enterprise) companies, the Automation & Control Engineering Technician will be the interface between the vendor and it's customer and will be able to competently provide high quality, engineering services such as installation, commissioning, fault finding (the activity of testing an installation prior to handover) and support.

APPRENTICESHIP REQUIREMENTS

Apprentices should have a range of skills and attributes including:

- Motivation to succeed within industry
- An awareness of the demands of the Apprenticeship
- Willingness to comply with employer/training provider terms and conditions of employment
- Have the ability to apply learning in the workplace
- Willingness to work with due regard to Health and Safety of self and others
- Effective communication with a range of people.



TYPICAL JOB ROLES IN THIS AREA INCLUDE:

Process Control & Automation Manager/Supervisor, Process Control & Automation Tester, Process Control & Automation Maintenance Engineer, Process Control & Automation Installation Engineer.

KEY FACTS:	
Delivery location	Stretford Campus.
Typical duration	48 months.
Study mode/frequency	1 day per week at college day release plus assessment visits in the workplace.
Apprenticeship Standard	Upon completion the Apprentice will receive a Level 4 Automation & Controls Engineering Technician Standard.
Knowledge and skills	<p>Knowledge:</p> <ul style="list-style-type: none"> • Engineering maths - mathematical principles and theories that underpin engineering • Engineering principles - the principles of electrical and electronic circuits and devices • Functional solutions - Create functional solutions; identifying and justifying a solution to a given engineering need. • Safety procedures • Single and three phase circuits • Automation knowledge - PLC, VSD, HMI & SCADA, robotics hardware and software tools • Instrumentation knowledge • Use of software tools • Understand technical documents • Safety legislation and responsibilities - electrical safety system legislation & directives • Quality systems - quality assurance principles to ensure operation, consistency and quantification of enhancement of manufacturing and process applications. <p>Skills:</p> <ul style="list-style-type: none"> • Know the customer profile of the business, who its main competitors are and the business growth strategy • Safety Effective - The ability to work safely in an industrial environment and where required, produce risk assessment/method statement documentation. • Engineering documentation - Production and interpretation of a range of technical documentation (device manuals, operating procedures, schematics, fault reports etc). • Project engineering capabilities - Support of installation, commissioning, shut-down, start-up and maintenance/service/support of a wide range of systems and devices • Diagnostic capabilities • Instrumentation configuration and calibration - Set-up, calibrate and commission a wide variety of field level instrumentation that interfaces to automation & control systems. • HMI & SCADA configuration and programming • PLC/Robot configuration and programming
Competency/skills or behaviours	<ul style="list-style-type: none"> • Zero Harm - Always prioritise on Health and Safety best practice. • Resilience - Sound and established ability to work effectively both in a team and alone. • Communicative - High quality communication skills. • Continual development • Ambassadorial - To be a role model of engineering practice and to promote engineering in order to sustain a pipeline of future talent.
Functional Skills	Functional Skills will be required for English and maths at Level 2 if you have not attained a GCSE at grade 4 or above (or equivalent).
Assessment	End point assessment will include a Project and Presentation, or occupational professional discussion.

For further information contact the Apprenticeship Team on **0161 886 7461** or email **apprenticeships@tcg.ac.uk**