The Standard

› Search the Apprenticeship Standards › Automation and controls engineering technician

AUTOMATION AND CONTROLS ENGINEERING TECHNICIAN

Overview of the role

Installing and maintaining hardware and software for automation systems

Details of standard

Occupation summary

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.

For both iterations of this role, this would involve the above duties across a range of hardware such as on Programmable Logic Controllers (PLC), Human Machine Interfaces (HMI), robots and Industrial Networks (e.g. PROFIBUS, DeviceNet, PROFINET, ModBus). Use of physical tools, software tools and instruments (e.g. multi-meter), are fundamental to carrying out tasks associated with building (e.g. control panels), installing (e.g. site cabling) and maintaining of automation systems.

This occupation will give employers the ability to maintain successful operational capability.

In their daily work, an employee in this occupation will be part of a multi-disciplinary team for example as a

Status: Approved for delivery

Level: 4

Reference: ST0662
Version: 1.0
Approved for delivery: 3 July 2019
Route: Engineering and manufacturing
Typical duration to gateway: 48 months (this does not include EPA period)
Maximum funding: £14000
Trailblazer contact(s):
jason.phin@siemens.com
Employers involved in creating the standard: Siemens, Amazon, Toyota UK, Bentley Motors, Mondelez, Omega, Mechatronics international UK, Bae Systems, Kuka Robotics, Fairfield Control Systems
LARS Code: 474
EQA Provider: Institute for Apprenticeships and Technical Education

Print the occupational standard (including PDF)

Automation and controls engineering technician assessment plan
File size: 660.8 KB

Institute for Apprenticeships & Technical Education

AUTOMATION & CONTROLS ENGINEERING TECHNICIAN

Reference Number: ST0662

Details of standard

Occupation summary

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.

For both iterations of this role, this would involve the above duties across a range of hardware such as on Programmable Logic Controllers (PLC), Human Machine Interfaces (HMI), robots and Industrial Networks (e.g. PROFIBUS, DeviceNet, PROFINET, ModBus). Use of physical tools, software tools and instruments (e.g. multi-meter), are fundamental to carrying out tasks associated with building (e.g. control panels), installing (e.g. site cabling) and maintaining of automation systems.

This occupation will give employers the ability to maintain successful operational capability.

In their daily work, an employee in this occupation will be part of a multi-disciplinary team for example as a member or leader of a project team, maintenance team, service

ST0662 EPA/01

INSTITUTE FOR APPRENTICESHIPS

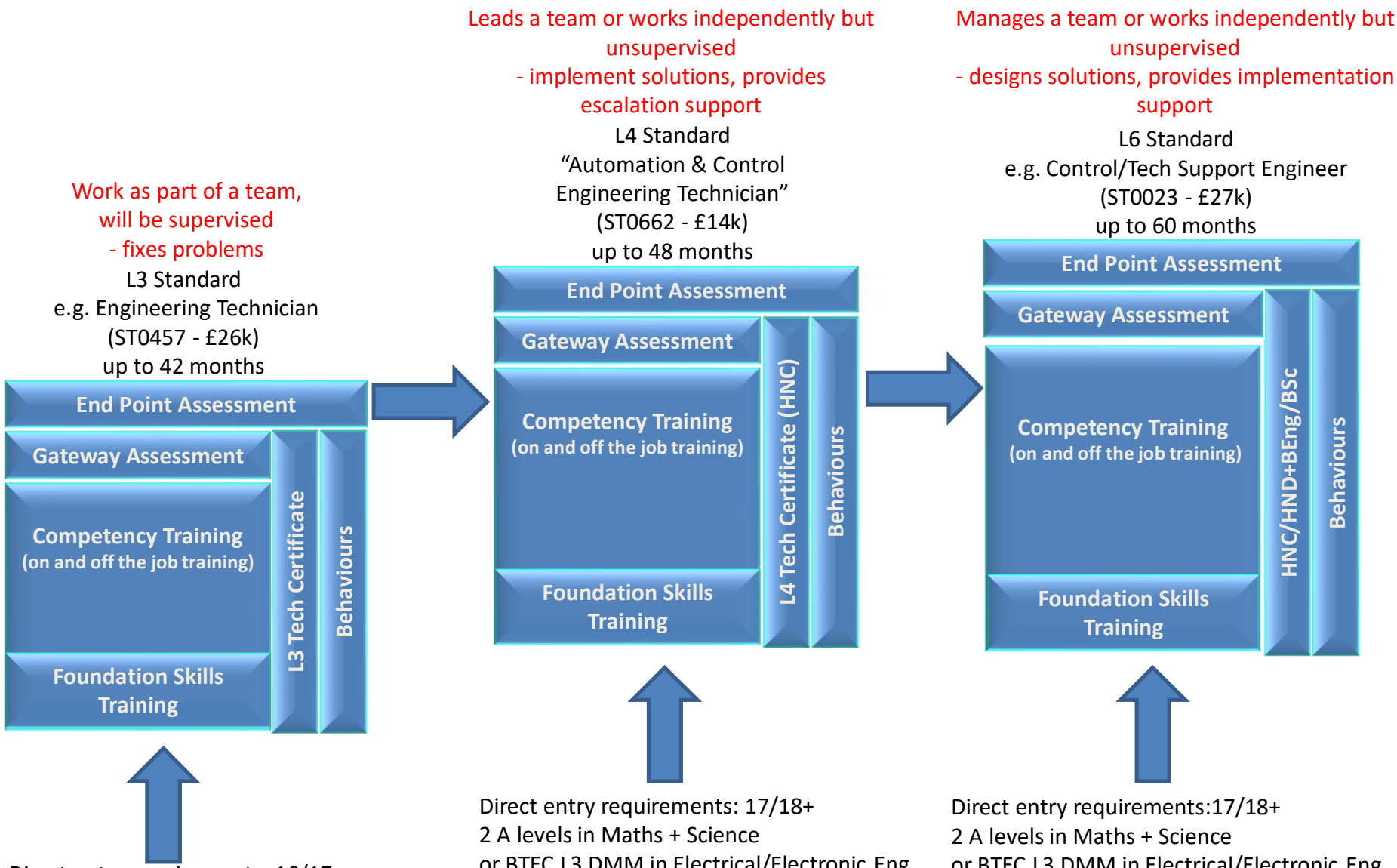
End-point assessment plan for Automation & Controls Engineering Technician apprenticeship standard

Apprenticeship standard reference number	Level of this end point assessment (EPA)	Integrated
ST0662	4	N/A

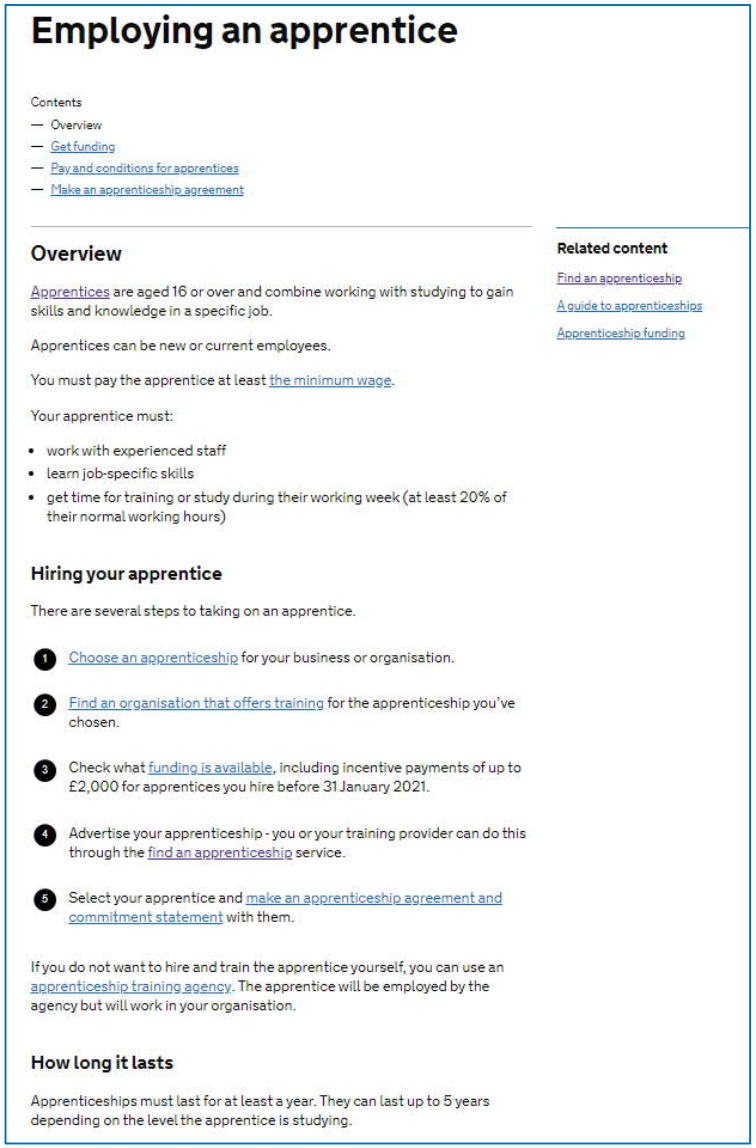
Contents

[Automation & Control Engineering Technician Standard]

Positioning of the Level 4 standard



Help in employing an apprentice



Employing an apprentice

Contents
- Overview
- Get funding
- Pay and conditions for apprentices
- Make an apprenticeship agreement

Overview

Apprentices are aged 16 or over and combine working with studying to gain skills and knowledge in a specific job.

Apprentices can be new or current employees.

You must pay the apprentice at least the minimum wage.

Your apprentice must:

- work with experienced staff
- learn job-specific skills
- get time for training or study during their working week (at least 20% of their normal working hours)

Hiring your apprentice

There are several steps to taking on an apprentice.

1. Choose an apprenticeship for your business or organisation.
2. Find an organisation that offers training for the apprenticeship you've chosen.
3. Check what funding is available, including incentive payments of up to £2,000 for apprentices you hire before 31 January 2021.
4. Advertise your apprenticeship - you or your training provider can do this through the find an apprenticeship service.
5. Select your apprentice and make an apprenticeship agreement and commitment statement with them.

If you do not want to hire and train the apprentice yourself, you can use an apprenticeship training agency. The apprentice will be employed by the agency but will work in your organisation.

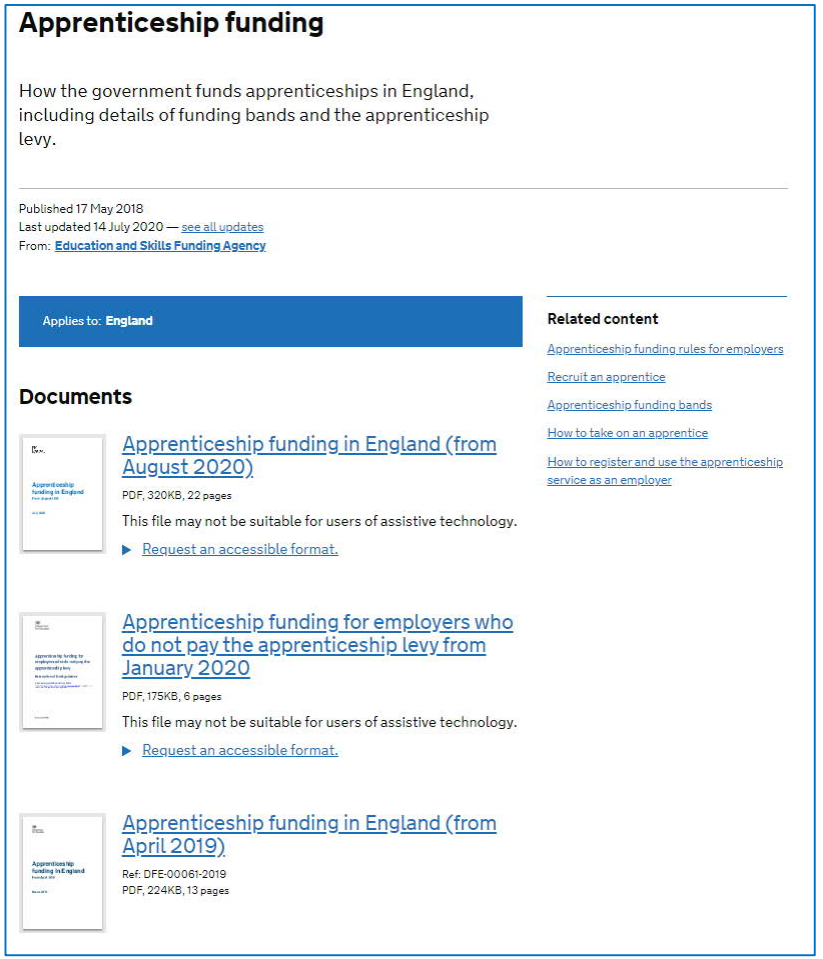
How long it lasts

Apprenticeships must last for at least a year. They can last up to 5 years depending on the level the apprentice is studying.

Related content

Find an apprenticeship
A guide to apprenticeships
Apprenticeship funding

https://www.gov.uk/employing-an-apprentice



Apprenticeship funding

How the government funds apprenticeships in England, including details of funding bands and the apprenticeship levy.

Published 17 May 2018
Last updated 14 July 2020 — see all updates
From: Education and Skills Funding Agency

Applies to: **England**

Documents

Apprenticeship funding in England (from August 2020)
PDF, 320KB, 22 pages
This file may not be suitable for users of assistive technology.
Request an accessible format.

Apprenticeship funding for employers who do not pay the apprenticeship levy from January 2020
PDF, 175KB, 6 pages
This file may not be suitable for users of assistive technology.
Request an accessible format.

Apprenticeship funding in England (from April 2019)
Ref: DFE-00061-2019
PDF, 224KB, 13 pages

Related content

Apprenticeship funding rules for employers
Recruit an apprentice
Apprenticeship funding bands
How to take on an apprentice
How to register and use the apprenticeship service as an employer

https://www.gov.uk/guidance/apprenticeship-funding-rules

Example of Direct Entry apprentice program

Stage	Skills Learning	Plan			Knowledge Learning
Development Phase	END POINT ASSESSMENT	Final year placement	Feb Jan Dec Nov Oct Sept	Year 5	
	END POINT ASSESSMENT PERIOD				
	GATEWAY ASSESSMENT		Aug Jul Jun May Apr Mar Feb Jan Dec Nov Oct Sept	Year 4	
	Level 3 PLC systems maintenance course	Long duration placements	Aug Jul Jun May Apr Mar Feb Jan Dec Nov Oct Sept	Year 3	
	Ethernet/PROFINET Commissioning and Maintenance course				
	PROFIBUS Commissioning and Maintenance course				
	Level 2 PLC systems maintenance course		Aug Jul Jun May Apr Mar Feb Jan	Year 2	
	Level 1 PLC systems maintenance course				HNC day release Yr2
		Short duration placements	Dec Nov Oct Sept		Proposed HNC Electrical and Electronic Engineering - 603/0451/0
	CCNSG Safety Passport Low Voltage Code of Operation training (with additional assessment)		Aug Jul		
Foundation Phase Development	NVQ Performing Engineering Operations Qualification Example PEO units AUEC2-039 Assembling, Wiring and Testing Electrical Panels/Components Mounted in Enclosures AUEC2-031 Producing Electrical or Electronic Engineering Drawings using a CAD System AUEC2-011 Wiring and testing programmable controller based systems AUEC2-010 Wiring and Testing Electrical Equipment and Circuits AUEC2-009 Maintaining Electrical Equipment/Systems AUEC2-004 Conducting business improvement activities AUEC2-003 Using and communicating technical information AUEC2-002 Working efficiently and effectively in an engineering environment AUEC2-001 Complying with Statutory Regulations and Organisational Safety Requirements	Block release	Jun May Apr Mar Feb Jan Dec Nov Oct Sept	Year 1	HNC Day release Yr1

Unit No.		Unit name	Level	Credits
1	Core - mandatory	Engineering Design	4	15
2	Core - mandatory	Engineering Maths	4	15
3	Core - mandatory	Engineering Science	4	15
4	Core - mandatory	Managing a Professional Engineering	4	15
19	Specialist - mandatory	Electrical and Electronic Principles	4	15
15	Option	Automation, Robotics and PLC	4	15
31	Option	Electrical Systems and Fault Finding	4	15
32	Option	CAD for Maintenance Engineers	4	15

Roles & Responsibilities

Employer	Training Provider
Payment of Levy (0.2% of wage bill >£3million)	Registration of apprentice
Evaluation of suitability of Apprenticeship Standard	Initial Skills Assessment
Selection of suitable Training Provider Employers are in the driving seat!	Facilitation of off the job training
Selection of suitable End Point Assessment Organisation (EPAO)	Claim of levy for fundable training
Decide on a budget – Funding level can be thought of as an offset against total training costs to provide for a competent apprentice.	Coaching of apprentice in compiling evidence for end point assessment including regular monitoring and quantification of behaviours
Recruitment of suitable apprentices Internal? External? Help from TP?	Monitoring and quantification of 20% off-the-job training
Contract of employment (allow up to 5 years, EPA is outside the duration of the standard)	
Ensuring relevant on-the-job experience.	
Assign appropriate mentor	
Allowance for 20% off the job training to take place Must be within contracted hours	
Deciding upon suitability of apprentice to progress through Gateway to End Point Assessment.	

Typical questions

What can I spend my Levy on?

- Levy is managed by the Education & Skills Funding Agency (ESFA)
- companies in England can decide how their levy is spent, different rules for devolved nations
- can only be spent with training providers on Register of Approved Training Providers (RoATP),
- subcontractors used by TP and/or specified by an employer for delivery of training must also be on RoATP
- can only be spent on training relevant to the Knowledge, Skills & Behaviours (KSB's) of the standard

Is my funding reduced if my apprentice already has a HNC?

- Yes, this would be deducted from the funding available by your training provider. They will not be able to substitute "other" training against prior mandatory qualifications.

Can I put an apprentice through a HND after the HNC?

- Yes, you cannot use levy funding for this qualification but you can pay for it and undertake it during this apprenticeship. Maybe consider a degree apprenticeship instead?

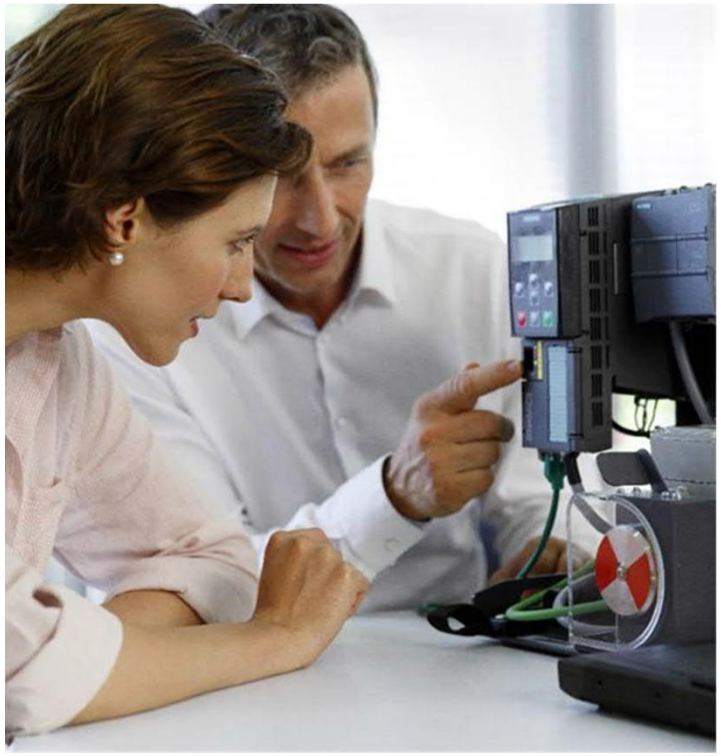
Helpful Links

Institute for Apprenticeships & Technical Education https://www.instituteforapprenticeships.org/

Apprenticeships https://www.apprenticeships.gov.uk/

GOV.UK https://www.gov.uk/topic/further-education-skills/apprenticeships

gta GROUP TRAINING ASSOCIATIONS ENGLAND Outstanding Training for Industry by Industry http://www.gta-england.co.uk/



Jason Phin
Training Solutions Business Manager
Siemens – Digital Industries

Sir William Siemens House
Princess Road
Manchester, M20 2UR

Mobile: + 44 7808 825620

E-mail:
jason.phin@siemens.com