

BUILDING SERVICES ENGINEERING CRAFTSPERSON APPRENTICESHIP LEVEL 3

City & Guilds

For new or existing staff

A Building Services Engineer makes buildings work. It is a specialist branch of engineering within the construction sector. Craftspersons undertake the installation, testing, pre-commissioning, commissioning and decommissioning of large-scale engineering systems which are used for heating workplaces such as those found in industrial and commercial buildings like office blocks, factories, schools and hospitals. These engineering systems operate by moving temperature controlled water around the inside of buildings, providing heating and cooling, and utilise fossil fuels and sustainable energy systems. Craftspersons have detailed knowledge of the system's operating principles.

Qualification

City & Guilds Level 3 Heating and Ventilating Craftsperson Qualification

Completers may want to progress to

- Becoming a Building Services Manager or Business Owner
- Compliance with Water Regulations, Unvented Hot Water, and Gas at Level 3

Delivery model and duration:

Apprentices will attend college on a block release. Theory lessons will be reinforced in the workplace and practical skills will be practiced and enhanced in college and the workplace. This can be supported by some remote delivery if required.

Duration: 24 months plus

End Point Assessment

Ideal for:

- Individuals seeking a career in the construction trade
- Existing employees wishing to upskill

The apprenticeship will cover the following core areas:

- Working safely
- Working sustainably
- Planning and preparing
- Installing pipework and systems
- Communicating effectively
- Working effectively and efficiently
- Taking responsibility
- Managing tasks

Benefits to business:

- Gain qualified employees who have the relevant knowledge and skills to work in housing, healthcare, social care, hospitality, education, commercial, leisure, retail, public and private sector buildings
- Upskill existing members of staff

Entry Criteria:

- GCSEs in English and maths at grade 9 - 4 or A* - C and completion of Building Services Engineer Installer Level 2 Qualification

Benefits for learners:

- Receive training from experts with years of industry experience
- Gain a nationally recognised qualification
- Become occupationally competent
- Advance career aspirations

0345 155 2020

employer.training@gloscol.ac.uk



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GC
Gloucestershire College

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End Point Assessment

The End Point Assessment will test the entire Standard, and be undertaken as follows:

- Knowledge Test
- Craftsperson Skills Test
- Professional discussion supported by the apprentice's record of achievement

Knowledge

Components

- English and Mathematics qualifications completed in line with the apprenticeship funding rules
- Level 3 Heating and Ventilating Craftsperson qualification prior to end point assessment

Unit	Overview
Working Safely	Understand relevant safety legislation and safe working practices applying to themselves and others in building services engineering working environments.
Working Sustainably	Understand scientific principles underpinning building services engineering industrial and commercial systems including measurement, force and pressure, heat and power, materials and electricity. Understand environmental protection measures within building services engineering for effective use of material resources, minimising wastage, the legislation surrounding the effective use of energy, gas and water resources.
Planning and Preparing	Understand how to utilise resources effectively within building services engineering including the roles and responsibilities of relevant people, how to oversee work; how to produce risk assessments and method statements and how to plan work programmes for self and small teams installing industrial and commercial systems. Understand the preparation requirements for work areas in new and existing building services engineering sites.
Installing Systems	Understand the design principles, layout, and operating principles, installation, testing, pre-commissioning, commissioning and decommissioning techniques for new and existing industrial and commercial cold water systems, hot water systems, heating systems, chilled water systems, compressed air systems and steam systems. Understand the principles and requirements of industrial and commercial gas, oil and solid fuel systems and mechanical sustainable energy systems.

Skills

Unit	Overview
Working Safely	Apply relevant safety legislation, codes of practice and safe working practices to self and others in building services engineering working environments.
Planning, Preparing and Working Sustainably	Apply pipework fabrication and jointing techniques for industrial and commercial systems, including prefabricated and/or modularised components and distribution systems and natural gas distribution pipework.
Installing Systems	Apply pipework fabrication, installation and jointing techniques for industrial and commercial system components to industry recognised standards. This includes prefabricated and/or modularised components and distribution systems, and including the assembly, positioning, orientation and fixing of storage vessels, heat emitters, pressure vessels, controls. Undertake allocated work tasks in the testing, pre-commissioning, commissioning and decommissioning of industrial and commercial cold-water systems, hot water systems, heating systems and chilled water systems.
Installing Pipework	Apply installation, testing, pre-commissioning, commissioning and decommissioning techniques for industrial and commercial; cold water systems; hot water systems, heating systems, chilled water systems.

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