



For **new** or **existing** staff

# Building Services Engineering Installer Apprenticeship Level 2

Delivered by Gloucestershire College

A Building Services Engineer makes buildings work. It is a specialist branch of engineering within the construction sector. Installers install components of large-scale industrial and commercial systems such as heating, chilled water, hot water and cold water which are used for heating workplaces such as those found in industrial and commercial buildings including 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. Installers have a basic knowledge of the systems and how the components within systems relate to each other.

## 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:

- A Building Services Engineering Installer wishing to upskill and progress to a Building Services Engineering Craftsperson.

## The apprenticeship will cover the following core areas:

- Working Safely
- Working Effectively and Efficiently
- Working Sustainably
- Taking Responsibility
- Planning and Preparing
- Working with Others
- Installing Components
- Communicating Effectively

## Benefits to business

- Nurture loyal and competent members of staff
- Upskill existing members of staff
- Gain employees who have the relevant knowledge and skills to succeed in their role

## Qualification:

**City & Guilds Level 2 Heating and Ventilating Installer Qualification**

## Completers may want to progress to

Level 3 Building Services Engineering Craftsperson Apprenticeship, to gain compliance with water regulations, unvented hot water, and gas at Level 3

## Entry Criteria:

- GCSEs in English and maths grade 9 - 3 or A\* - D

## Benefits for learners

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



## Why work with Gloucestershire College

We will work in partnership with you to help you achieve your business objectives by providing exceptional apprenticeship programmes, a comprehensive range of staff training and skills development courses and access to an unrivalled resource of motivated and work ready employees.

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## End Point Assessment

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

- Knowledge Test
- Installer Skills Test

## Components

- Level 2 Heating and Ventilating Installer qualification prior to end point assessment
- Functional Skills Maths and English at Level 2

## Knowledge

Unit	Overview
Working Safely	Understand safe working practices applying to themselves and others in building services engineering working environments.
Working Sustainably	Understand basic 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 plan and organise allocated component installation work tasks including: how to interpret instructions correctly; how to organise the sequence of activities to be undertaken; how to ensure the necessary tools and components are available as required; when and how to involve other trades; how and when to report problems. Understand how to prepare work areas to undertake allocated component installation work tasks including: how to maintain safe access and egress for self and others; how to work with and alongside other trades; how and where to store tools, equipment and components to ensure safe and efficient work flow; and how to correctly identify mechanical services and electrical tool supply connections.
Installing Components	Understand the basic operating principles, and basic installation, testing, pre-commissioning, commissioning and decommissioning processes of industrial and commercial cold-water systems, hot water systems, heating systems, chilled water systems, compressed air and steam systems. Understand how system components relate to each other within each of the industrial and commercial systems, including the assembly, positioning, orientation and fixing requirements of storage vessels, heat emitters, pressure vessels, controls.

## 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	Plan, organise and undertake the installation of industrial and commercial system components in ways which use resources effectively to complete allocated work tasks, effectively, safely and with consideration to environmental impact using industry recognised practices. Prepare work areas in new and existing sites to undertake allocated component installation work tasks ensuring: safe access and egress for self and others is maintained; components, tools and equipment are stored and positioned safely and to allow efficient workflow; mechanical supply services and electrical tool supply connections are correctly identified; and the need for other trades support is identified and arranged.
Installing Components	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.

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