

# PLUMBING AND DOMESTIC HEATING TECHNICIAN APPRENTICESHIP STANDARD

Standard Code ST0303  
Course Level 3  
Combined Day and Block Release  
Location: Lincoln  
Funding Level £21000  
Duration 48mths including EPA

## *Course Description*

Plumbing and Domestic Heating Technician apprentices will be able to plan, select, install, service, commission and maintain all aspects of plumbing and heating systems.

Plumbing apprentices may find themselves working inside or outside a property. Customer service skills and being tidy and respectful are important qualities as they can often find themselves working in customers' homes as well as on building sites.

Once trained as a competent Plumbing and Heating Technician, the apprentice will be able to install plumbing and heating systems including accurate measuring, marking, cutting, bending and jointing metallic and non-metallic pipework. Appliances and equipment can include gas, oil and solid fuel boilers as well as pumps, heat emitters, bathroom furniture or controls as part of a cold water, hot water, and central heating or above ground drainage and rainwater systems.

Plumbing and Domestic Heating Technicians are at the forefront of installing new and exciting environmental technologies like heat pumps, solar thermal systems, biomass boilers and water recycling systems. It is important for a plumbing and heating technician to be able to work independently or as a team and use their knowledge and skills to ensure that both the system and appliances are appropriately selected and correctly installed, often without any supervision, and done so in a safe, efficient and economical manner to minimise waste.

## ***Off the Job Training***

A key requirement of an Apprenticeship is Off-the-job training. This must make up an average of 6 hours per week of the apprentice's working hours, over the total duration of the apprentice's planned training period. Off-the-job training must be directly relevant to the apprenticeship standard and must take place within the apprentice's normal working hours.

The new learning must be documented and reflected on through the Learner Journal on their e-portfolio.

## ***Entry Requirements***

GCSE Grade 4 in English & Maths + positive references.

Before a candidate is offered a place on the Plumbing Apprenticeship, both the candidate and the employer will be assessed to make sure they're suitable to undertake the apprenticeship. The apprentice will need to attend an initial assessment and meet academic entry requirements. The employer must be able to offer the apprentice the range of work required to enable the candidate to gather sufficient evidence throughout the course.

Apprentices will require access to a tablet/computer to access their e-portfolio.

## ***Knowledge, Skills and Behaviours***

### **KNOWLEDGE**

#### **Health and safety**

- Understand health and safety legislation, codes of practice and safe working practices.

#### **Core plumbing systems**

- Understand selection, planning, installation, testing, commissioning and de-commissioning, service, maintenance, fault diagnosis and repair techniques on cold water, hot water, central heating, above ground drainage and rainwater systems.

#### **Electrical components and control systems**

- Understand installation and testing techniques for electrical components and control systems on plumbing and domestic heating systems.

#### **Plumbing science and processes**

- Understand scientific plumbing, domestic heating and mechanical principles.

### **Principles of environmental technology systems**

- Understand the principles of domestic mechanical environmental technology systems.

### **Principles of fossil fuels**

- Understand the principles of fuel combustion, ventilation and fluing arrangements within a domestic environment.

### **Customer service**

- Understand the principles of high-quality customer service and establishing the needs of others (colleagues, customers and other stakeholders).
- Respect the working environment including customer's properties.

### **Communication**

- Understand different communication methods, how to communicate in a clear, articulate and appropriate manner and how to adapt communication style to suit different situations.

## **SKILLS**

### **Safe working**

- Operate in a safe working manner by adhering to health and safety legislation, codes of practice and applying safe working practices.

### **Core plumbing system techniques**

- Apply selection, planning, installation, testing, commissioning and de-commissioning, service, maintenance, fault diagnosis and repair techniques on cold water, hot water, central heating, above ground drainage and rainwater systems.

### **Electrical components and control systems techniques**

- Apply installation and testing techniques for electrical components and control systems on plumbing and domestic heating systems.

### **Supervisory skills**

- Take responsibility for own work and safety and welfare of others.
- Oversee and organise the programme of work and work environment.
- Carry out work and manage resources in an environmentally friendly manner.

## **BEHAVIOURS**

### **Honesty and Integrity**

- Develop trust with customers and colleagues by undertaking responsibilities in an ethical and empathetic manner.

### **Dependable and responsible**

- Show conscientiousness through being punctual, reliable and professional.
- Take responsibility for own judgements and actions.
- Aware of the limits of their own competence.

### **Enthusiasm and positive attitude**

- Demonstrate drive and energy in fulfilling requirements of role.

### **Quality focus**

- Be quality focussed in work and in personal standards.

### **Willingness to learn**

- Identify own development needs and act to meet those needs.
- Keep up-to-date with best practice.
- Maintain and enhance competence.

### **Work with others**

- Work effectively and collaborate with colleagues, other trades, clients, suppliers and the public.

### **Sustainable working:**

- Consider appropriate use of resources and own actions considering the impact on environmental, social and economic factors.

## **Assessment**

Once accepted onto the course, the apprentice will attend college on a day release basis to undertake practical training, theory work, undertake reviews, update their portfolio and record their 'Off the job Training'. The apprentices may also attend several block weeks for their practical training.

The apprentice will be assessed by a work-based assessor through practical work with their employer and at college.

Review of progress and growth targets will be set every 4 – 10 weeks, depending on individual needs

## **End Point Assessment**

### **On-Programme / Working towards the Gateway**

There are 4 Phases included in this apprenticeship. The apprentice will usually complete one phase per academic year. At the end of each phase the apprentice will sit a summative test. If the apprentice fails the test then they can re-sit within 14 days. If the re-site is failed then they will be required to re-train for 60 days before they can be entered for the test again. If this happens then a review meeting will be held with the apprentice and their employer to discuss whether the student should continue on the apprenticeship.

Once both the assessor and employer are confident that the apprentice is ready for EPA then the apprentice will go through the gateway. In order for the apprentice to go through the gateway they must have passed their Maths & English GCSE's at grade 4 or above OR have passed Level 1 Functional Skills and have taken an assessment at Level 2.

### **End Point Assessment**

The Final Assessment forms a large part of the assessment of the apprenticeship and will be delivered by a 3rd party independent assessor.

End-Point Assessment includes;

- An Online Knowledge Test (50 Questions / 90 Minutes).
- A Practical skills test in an unfamiliar location (7 Hours).

A professional discussion based on an 8-week work log produced by the apprentice after gateway.

## **Progression**

By the end of this apprenticeship the candidate will have satisfied the requirements for registration as EngTech by the Engineering Council through The Chartered Institute of Plumbing and Heating Engineering (CIPHE) and or The Chartered Institute of Building Services Engineers (CIBSE).

On completion of the health and safety assessment, as determined, by the assessment plan the candidate will have satisfied the requirements to obtain a Construction Skills Certification Scheme (CSCS) Card through the Joint Industry Board for Plumbing and Mechanical Engineering Services (JIB-PMES) at the appropriate grade.

The apprentice will also have successfully completed ACS and have been put on the Gas Safe Register.

## **Fees**

As an Apprentice, you will pay no course fees. However, your employer may have to pay towards your training as well as providing you with a wage. All Apprentices are entitled to the national minimum apprentice wage within their first year of training from their employer, although they can, and often do, pay more. In the second and subsequent years of an Apprenticeship programme, if you are aged 19 or over, the national minimum wage for your age would apply [<https://www.gov.uk/national-minimum-wage-rates>]

If you are an employer and want to find out more information regarding employer contributions and any further costs related to the Apprenticeship programme, please contact our dedicated Apprenticeship team at [employers@lincolncollege.ac.uk](mailto:employers@lincolncollege.ac.uk)

## **Business Benefits**

Employers have designed the Apprenticeship Standards to meet the needs of the sector and industry. Ensuring they include:

- Relevant Knowledge, skills and behaviours ensure that the Standard is relevant to the occupation.
- Widening participation Apprenticeship standards provide opportunities to employees that may not previously have been available.
- Development tools A cost effective way to train your employees to undertake specific roles in your business.
- Return on Investment On average, an apprentice who has completed their course will increase business productivity by £214 per week (CEBR, 2015).

## **Key Contacts**

For further information or to arrange a face to face visit, please contact a member of the Construction Apprenticeships team using the details below;

Jon Cotton  
Learning & Skills Lead (Construction)  
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