

Starting out on a career in the plumbing and heating industry? You may have many questions to ask! The Chartered Institute of Plumbing and Heating Engineering has collated its most frequently asked questions into one handy fact sheet.

What is the industry like?

The plumbing industry holds diverse career paths, good wages and the opportunity for individuals to run their own business. Because of this, many plumbers stay on the tools for the whole of their career, but others progress to design, consultancy, teaching and management.

A role in the plumbing and heating industry offers a career with many opportunities. Deemed as critical workers, good plumbers are always in demand, whether that's in people's homes, on building sites, working on infrastructure such as water or gas, or installing and maintaining commercial or industrial systems.

What can I earn once qualified?

This is a tricky question to answer because it depends on a lot of things, such as the area you work in, the size of the business you work for, the type of work you undertake and whether you earn extra accreditations such as Gas Safe registration. Most domestic plumbers are self-employed; therefore, earnings will be dependent on the demand from their client base. While plumbers are unlikely to need a business premises, there will still be a number of expenses to account for including public liability insurance, professional registrations and accreditations, training courses, tools and equipment, accountancy, running a van, parking fees, traffic zone charges or tolls, food and drink, work clothing etc.

The following figures are regularly cited as average earnings:

- After gaining industry recognised qualifications, an individual in an entry-level position can expect to earn around £15k-£20k on the tools.
- After gaining more experience in the industry, this can rise to anything between £25k and £45k, with the average UK wage hovering around £30,000-£32,500.
- In cities such as London, the average earnings will be higher due to the increased expenses and cost of living.
- Likewise, plumbing isn't a 9-5 office job, so those prepared to work unsociable or long hours have the potential to earn more.

As in any industry, there are highflyers and exceptions to the rules. Depending on how well your career or business progresses, you could earn considerably more than £45,000 per year.

How diverse is the industry?

The honest answer is that the sector has much work to do when it comes to diversity. The construction industry is male dominated, and the plumbing and heating sector is no different. Estimates vary between 98-99% of the industry being male. However, the number of women is slowly rising. The plumbing and heating industry offers the chance to be your

own boss, flexible working hours for the self-employed and good earning potential, so it's a little surprise many women are now seeing the appeal.

The industry needs to work harder in relation to LGBTQ+ inclusivity. When surveyed, many in the LGBTQ+ community working in construction choose to keep their identity to themselves while in the workplace. This was for many reasons, including concern over career progression and homophobia. Ironically, for women, this is less of an issue.

When it comes to cultural diversity, the statistics are a little better, but the industry continues to be predominantly white British in nature. In larger cities and towns, the cultural mix of engineers may better reflect the local population, e.g., step onto a commercial building site in London and there will be engineers from different counties, backgrounds, race and religions working together. However, if you call a plumber out to your home, the odds are that a white British man will turn up at your door.

When it comes to disability, there are barriers to inclusion, especially in on-the-tools roles. The physical nature of a construction role puts the physically less able at a huge disadvantage and means it's often not a career path that is pursued. However, for the technically minded, a career in design, research and development, consulting or manufacturing offers several possibilities.

What skills do plumbers need?

On the tools, plumbers engage in a physically demanding role, but it's not all about brute strength, it also requires dexterity and the ability to work in some pretty cramped places! You'll need a head for heights, good visual-spatial awareness and common sense. You'll also need a decent grasp of maths, science and communication skills for dealing with clients and other trades. You'll also need to be organised and not get flustered when dealing with paperwork and general admin, ordering products and keeping the van well stocked. A clean driver's license would be highly advantageous.

How does vocational training differ to an academic qualification?

If you choose a vocational course or apprenticeship, your experience of education will differ greatly to those undertaking an academic route to employment. A larger proportion of your course will be dedicated to learning the physical skills you need, in the workplace, with a smaller portion dedicated to theory or classroom-based learning.

That is not to say that theory isn't vitally important. However, if you don't develop the practical skills you need, your physical ability will not be up to scratch to gain employment. This is why an industry recognised qualification will always include workplace experience.

What Level do I need to train to?

It's really important the learner knows what qualification they will gain at the end of their course and if it will deliver the right knowledge, skills and experience to be gainfully employed in the industry.

To complicate things, just because you are working towards a certain Level of qualification, it does not mean that qualification will make you employable on completion, or give you the knowledge or skills to immediately go self-employed. For example, if you are taking a classroom-based course, without adequate on-the-job experience at Level 2, you will not gain the practical, work based competence, experience or skills, that will allow you to complete your portfolio or on-site assessments to gain a full NVQ.

The below is a basic breakdown of the course Levels:

- **Level 1** courses are an introduction to the industry only and will not leave you qualified to undertake employed plumbing work.
- Those looking to enter the industry, should aim for a full **Level 2** qualification, (NVQ Level 2 or equivalent), which includes on-the-job work experience.
- To receive the most comprehensive level of training, the CIPHE recommends undertaking a full **Level 3** qualification (NVQ Level 3 or Apprenticeship). An NVQ Level 3 can be undertaken once the learner completes the full NVQ Level 2 - this once again requires work-based experience to complete.
- Those starting an apprenticeship programme in England after August 2020 will receive a Level 3 qualification, plus registration for a CSCS card, as well as eligibility for registration as an Engineering Technician with the Engineering Council UK on completion of their apprenticeship.

The bottom line is that it takes years to train to be a plumbing or heating engineer, and most of that time is spent learning the physical skills required to do the role. If your course does not include mastering those skills in a workplace environment, it will not provide you with an industry recognised qualification.

How do I join the industry?

Traditionally there have been three main ways into the industry:

- Via a college course / private training provider
- Via working towards this role, e.g., as a plumber's mate or labourer without formal qualification
- Via an apprenticeship.

Nowadays the majority of industry entrants train via an apprenticeship or via the college / training provider route. Some also undertake a Traineeship prior to undertaking formal learning to see if they like the industry. In England, T-Levels (the technical equivalent of A-Levels) will also offer a pathway into the industry from September 2021.

What are Traineeships?

A traineeship is an education and training programme with work experience, which is focused on giving young people the skills and experience that employers are looking for. Basically, they help young people to become 'work ready' before they go on to do an industry recognised qualification such as an apprenticeship.

The Traineeship will include qualifications in employability, English and Maths, as well as an introduction to units within the chosen vocational career pathway. Traineeships can last from six weeks to 12 months, (though most last for six months) and gives the trainee the opportunity to see if they are suited to the job.

Traineeships are delivered by training providers and funded by the government, with employers providing the valuable work experience placement as part of the programme. Unlike apprenticeships, the trainee will not be paid a wage.

More information is available at <https://www.gov.uk/find-traineeship>

How do I join the industry via a college course?

Colleges can be a great place to start learning a trade and offer a number of different courses, aimed at different levels of skill and understanding.

Do as much research as possible. Online is a great place to start or contact your local FE college, technical college, or training centre to find out if they have a plumbing department. If they do, try to find out if they can help with work experience – some colleges have contacts with local employers.

The college will be able to inform you of any entry qualifications required to gain a place on the course, term start dates, length of the course and costs. Colleges will likely run courses full time, part time and may offer evening courses.

It's really important the learner knows what qualification they will gain at the end of their course and if it will give them the right knowledge, skills and experience to be gainfully employed in the industry. As previously mentioned, technical (theory only) only courses are a good introduction to the industry but will not leave you qualified to work on plumbing systems. Also find out if the tutors/assessors have themselves achieved NVQ Level 3 (or equivalent), hold industry experience and have a teaching qualification.

How do I join the industry via a private training provider?

Going down this route may suit some older learners as there isn't the 'tie-in' of academic start dates, term times, etc. However, this does come at a premium as it would normally cost more than enrolling on a college course. A private training provider may also provide a more 'mature' learning environment, compared to that provided by some colleges.

A word of warning – like most things there are good and bad training providers. Even though some will have excellent facilities, they may not offer industry-recognised qualifications with on the job learning. Choose wisely or you could spend a lot of time and money on a worthless qualification. The CIPHE recommends doing as much research as possible before committing to any courses, including finding out about the tutor/ assessors’ credentials and how many students normally attain the full NVQ Level 2 or 3 qualification. Remember it takes years to train as a plumber and you’ll require workplace experience to qualify.

How do I spot a rogue training provider?

Not all plumbing courses or training providers are equal, so it can be a minefield selecting the right course. Complaints against rogue training providers are rising. These types of courses will often come from private companies and promise qualifications in weeks, or months, claiming to condense quality learning into small timeframes.

These types of training providers may offer classroom-based learning or home study courses that fit in around current commitments. Overall, these types of courses are very big on theory and offer some practical work (normally in the training centre). Some training providers say they will help to get you work experience, but they don’t guarantee it. Some will only give short ‘work placements’, which can lead to the student being ill prepared for assessment. Such short placements often do not provide the workplace experience required to fulfil the full NVQ qualification.

These types of courses tend to be extremely expensive. Read the small print, as some may advertise the fact that their training centre is approved by an awarding organisation, but this does not necessarily mean that the course on offer is the industry recognised plumbing course that will lead to a worthwhile qualification.

Unfortunately, most learners realise their mistake after their fees have been paid and find their ‘qualification’ is not recognised by the industry. It takes years, not months to learn a trade - remember there are no short cuts.

How do I find a reputable training course?

Look out for a training provider with CIPHE Approved Training Centre (ATC) status. View our list of ATCs on the CIPHE website www.ciphe.org.uk

How do I gain work experience?

If you are undertaking a course at college or a private training provider, you will need adequate work experience to gain an industry recognised qualification. Many people are caught out by this and find themselves unable to complete the full NVQ Level 2 or 3 Diplomas. Without the full qualification it will be hard to gain employment in the plumbing and heating industry.

If the college/training centre can't help with work experience, you could try contacting local plumbing companies to see if they can assist. It must be said that the majority will be SMEs (small or medium enterprises), often sole traders. For these types of businesses, taking on a trainee can be a daunting prospect as they balance the time training you up with the benefit for the business. Training somebody takes time and patience, and liability for any mistakes made can be off-putting. Some businesses may be inclined to offer work experience, providing they don't have to pay you - whether you are in a position to accept such an offer will be dependent upon your own personal circumstances.

Ask around your family and friends to see if they know anyone in the trade who might give you a chance. If you have transferable skills, such as plastering or tiling, it will put you in a favourable light, as will having a clean driving license.

It might be worth visiting local plumbing merchants to see if they have a notice board. Ask if you can have a space to put up some details about yourself. CIPHE Trainee members can use the CIPHE's Work Experience service to advertise their details online.

Social media can also be a good tool to use. There are opportunities to reach large audiences on LinkedIn, Facebook and Twitter. Community Facebook Groups can be a particularly good place to enquire. Keep your post short and snappy, giving key information about yourself, such as the skills and relevant experience you can offer, and if you have a clean driving license etc. It's amazing how many people could end up seeing your request for work experience.

Working towards the job

It is rarer nowadays, but there are those who learn a trade while on the tools, but without also attending college for a formal qualification. Today there are several tradespeople operating under 'Grandfather rights' – those with great knowledge and skill, but no qualifications. However, their number is set to fall as steps are being taken to phase out those working on commercial building sites without formal qualifications. Changes to the CSCS scheme mean that the 60,000 holding industry accredited CSCS cards, will no longer qualify for them by 31 December 2024. This will effectively block a number of skilled workers from UK construction sites from 2025.

The CIPHE's advice to anyone hoping to enter the trade via this route is to also study for a formal qualification too. Those in the industry need to move with the times and gaining an industry recognised qualification is key.

Apprenticeships

An apprenticeship is a work-based training programme that offers paid employment while you learn. This is the preferred route of many joining the industry, but be warned, competition for employment as an apprentice can be fierce.

The main benefit is being able to gain valuable work experience and learning, debt-free*. While those on degree courses may end up thousands of pounds in the red, those on apprenticeships will be developing all the practical and technical skills needed to progress in their chosen career, while they earn.

From 1 August 2020, all new apprenticeship starts had be on the new, employer-designed Standards.

** Those aged 24 and under do not pay towards training costs*

Who can apply for an apprenticeship?

Anyone can apply for an apprenticeship, as long as they are over the age of 16.

What entry qualifications do I need?

Generally, applicants will require English and Maths qualifications at Level 2. This equates to GCSE grade C - A (pre-2017 GCSE qualifications) or grade 4 - 9 (new GCSE qualifications). A good science grade would also help.

When it comes to the Trailblazer Apprenticeships, **employers set the entrance criteria**. So, someone who can prove they have the right attitude and aptitude for the role may gain it without hitting Level 2 for English and Maths. However, it will be expected that apprentices hold a GCSE in both English and Maths at grade 4-9 on **completion of the apprenticeship**, which will mean adding study for Maths and English GCSE's alongside that for the apprenticeship.

If you have already attended college and gained A-Level qualifications, a career in plumbing is still a good choice. Whether you want to go on the tools or choose to enter research and design, environmental health, management, consultancy, another engineering position or teaching, after successfully completing your plumbing courses, it would be easier for you to take the next step on to an appropriate degree course. This would enable you to eventually gain professional recognition with the Engineering Council as either an Incorporated or Chartered Engineer.

When to apply?

There are no set rules around apprenticeship start dates – it depends on the employer and when they need to recruit to fit their business needs. However, you may find that some larger employers will be recruiting far in advance of when the apprenticeship actually starts.

Every apprenticeship vacancy will include a start date and a closing date, so be sure to check both.

What are the training costs?

In England, Wales, Scotland and Northern Ireland those aged between 16 and 24 won't usually have to fund their tuition - the employer and the government cover the fees.

However, if you are over 25, you may be asked to contribute towards the cost of your training. Some employers will cover this cost, so do ask at your interview.

There is help available for the over 25's in forms of loans, grants and bursaries, depending on which of the home nations you study in. See our 'further apprenticeship advice' section on p9 for useful links.

How long does an apprenticeship take?

This varies depending by what home nation you are studying in.

In **England** the Plumbing and Domestic Heating Technician apprenticeship normally takes up to four years to achieve. However, there is flexibility to allow either those with pre-existing experience and qualifications, or particularly gifted students to finish earlier.

In **Scotland** the Domestic Plumbing and Heating modern apprenticeship usually takes three years to complete.

In **Wales** apprenticeships are split into NVQ Levels:

- NVQ Level 2 (the entry level qualification) usually lasts two years full time.
- NVQ Level 3 is the industry recommended qualification and takes an additional year full time, taking the total apprenticeship to three years.

In **Northern Ireland** apprenticeships are also split into two levels:

- A Level 2 qualifications would normally last two years full time.
- A level 3 qualification would normally take a further two years.

However, there is some flexibility as the apprenticeship duration can vary and can be agreed between the apprentice, training contractor and employer.

How much does an apprentice earn?

All apprentices must receive the appropriate national minimum wage for their age. This may not sound a lot, but when you consider that a university course could cost around £9,000 per year, it's really not that bad.

Find out more on the minimum wage here: <https://www.gov.uk/national-minimum-wage-rates>

Becoming a plumber: FAQs



How many hours do apprentices work?

Approximately 30 hours per week, plus a day at college. The working day may start at 8am and end around 4pm.

Holidays?

Apprentices are entitled to 20 days of paid holiday per year, plus bank holidays.

How do I apply for an apprenticeship?

To get an apprenticeship, you need an employer. There are a number of ways to find one and where you start to look will depend on where you live.

For apprenticeship vacancies in **England** visit:

<https://www.gov.uk/apply-apprenticeship>

For apprenticeship vacancies in **Scotland** visit:

<https://www.apprenticeships.scot/find-a-vacancy/>

For apprenticeship vacancies in **Wales** visit:

<https://careerswales.gov.wales/apprenticeship-search>

For apprenticeship vacancies in **Northern Ireland** visit:

<https://www.nidirect.gov.uk/services/search-apprenticeship-opportunities>

You can also

- Check out the recruitment section of local newspapers to see if any companies are advertising apprenticeship vacancies.
- Search the internet for companies to see if they are advertising apprenticeship opportunities.
- Get in touch directly with local companies and give them a copy of your CV. Ask them to keep it on file in case a vacancy arises.
- Ask family and friends if they know of anyone who is looking for an apprentice.

Further apprenticeship advice

England

National Apprenticeship Service

<https://www.apprenticeships.gov.uk/>

Scotland

Apprenticeships Scotland

<https://www.apprenticeships.scot/>

Becoming a plumber: FAQs



Wales

Welsh Government

<https://gov.wales/become-apprentice>

Northern Ireland

Northern Ireland Government

<https://www.nidirect.gov.uk/campaigns/apprenticeships>

CIPHE Trainee membership

Once an individual has enrolled on an accredited course, they can apply for Trainee membership of the Chartered Institute of Plumbing and Heating Engineering.

This will give them access to an e-learning portal, which is packed with learning modules, demonstration videos, literature and technical information. Leading manufacturers have contributed modules, which cover a wide range of topics, including renewables.

Trainee members benefit from a range of discounts and special offers. They will also be eligible to apply for awards and bursaries. Should Trainee members need help securing work experience, they can take advantage of having their details added to the Work Experience section on the Institute's website www.ciphe.org.uk

Another benefit of membership is that it shows employers you are on the right track from the very start of your career - holding professional development and high standards at the core of your work ethos.

Trainee membership currently costs just £30 annually – this includes access to learning support and delivery of *P&H Engineering* magazine four times a year.

For further details please contact the Membership Department at membership@ciphe.org.uk or ring 01708 463116.