

## All about Building Services

Issue 06 January 2019

A newsletter from City & Guilds on professional and technical educational updates in Building Services for all nations.

### In this issue:

- Functional skills
- T Levels
- CIBSE design Guides
- Opportunities
- Digital credentials for 18<sup>th</sup> edition
- New qualifications and updates
- New Learning Support Materials
- Regional Network Meetings and webinars
- Off the job training guidance

## Newsletter

Have you downloaded our previous newsletters?

Please follow this link to view past newsletters containing information on various BSE topics

<https://www.cityandguilds.com/qualifications-and-apprenticeships/building-services-industry#fil=apprenticeship>

## Functional skills updates

The reformed Functional Skills qualifications will be available for teaching with effect from September 2019, to find out what this means for your delivery and the impact on your apprentices, join our monthly webinars to keep up to date.

Visit the Functional Skills page for further information and the link to register for the webinars:

<https://www.cityandguilds.com/what-we-offer/centres/maths-and-english/functional-skills-assessment-updates>

## Update on government reforms

### T-Levels – England

A recent IfA review of content has resulted in the Design, Surveying and Planning pathway being selected for delivery of a T level in 2020, ahead of Building Services Engineering and On-site Construction, which will now follow for first delivery in 2021:

<https://www.instituteforapprenticeships.org/about/outline-content-for-first-new-t-levels/>  
<https://www.cityandguilds.com/tlevels>

## Email Updates

Please register for email alerts to remain updated. All invites to regional networks, seminars and regular updates like this newsletter will be advertised through the email update system, if you are not registered you may be missing out.

**Register here** - <https://www.cityandguilds.com/what-we-offer/centres/email-updates>

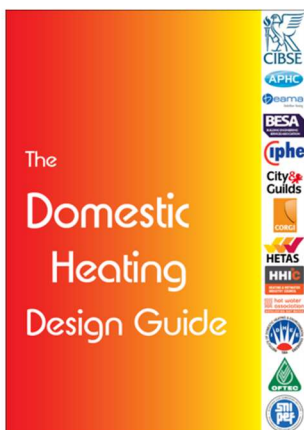
## CIBSE Design Guides

As City and Guilds we strive to support industry and the development of skills. As part of one of the projects we work on we support the development of the design guides from the domestic building services panel (DBSP) endorsed by CIBSE.

The Panel is dedicated to the furtherance of best practice in the survey, design, installation, commissioning, operation and maintenance of domestic building services. The Panel maintains and develops guidance in the design and installation of domestic building services systems. Such guidance is intended for the use of practitioners working on the design, installation and maintenance of domestic building services. We can then utilise the content of the guides and use them in the development of things such as our assessment material and content. An example of this would be our central heating design assignment which refers to some of the core content.

The following guides are now available for more information visit [dbsp.co.uk](http://dbsp.co.uk)

## Domestic Heating Design Guide



Contents
Foreword
1.0 Introduction
1.1 Objective
1.2 Specification
1.3 Scope
1.4 Installation
2.0 Abbreviations
3.0 Establishing the Client's Requirements
3.1 General Requirements
3.2 Fuel Choice
3.3 Heating Requirements
3.4 Ventilation
3.5 Heat Generators
3.6 Boilers, Flues, & Attachments
3.7 Heat Pumps
3.8 Solid Fuel Wood & Biomass Appliances
3.9 Oil Fired Appliances
3.10 Heat Emitters & Their Location
3.11 Pipework
3.12 Controls
3.13 Domestic Hot Water
3.14 Plumbing Services
3.15 Existing Systems
3.16 Energy Efficiency
4.0 Energy Efficiency
4.1 What Energy Efficiency Means
4.2 Environmental Impact
4.3 Primary & Delivered Energy

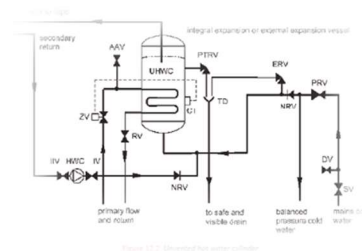
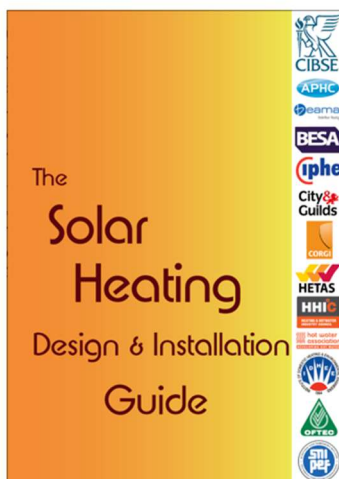


Figure 2.1.1 - Schematic hot water collector

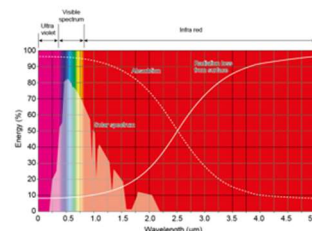
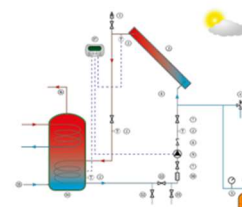
The worked example below shows the thermal resistance of each layer and for all layers together.

Layer	Calculation	Resistances $R \text{ m}^2\text{K/W}$
a External surface		0.060
b Brick	$0.1025 / 0.84$	0.122
c Airspace		0.180
d Insulation	$0.025 / 0.04$	0.625
e Block	$0.1 / 0.17$	0.588
f Plaster	$0.013 / 0.16$	0.081
g Inside surface		0.120
Total Resistance R		1.776
U-value of construction	$= 1 / 1.776$	$= 0.56 \text{ W/m}^2\text{K}$

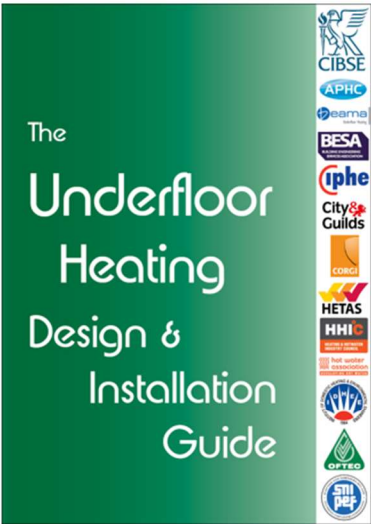
## Solar Heating Guide



Contents
Foreword
1.0 Introduction
1.1 Objective
1.2 Scope
1.3 Context
2.0 Overview
2.1 System Terminology
2.2 The Preheating of Domestic Hot Water
2.3 Circulator Pumps
2.4 Heat Circulation
2.5 Primary Fluid Expansion
3.0 Systems
3.1 Indirect Systems
3.2 Direct Systems
3.3 Open Vented Primaries
3.4 Fully Filled & Sealed System Primary
3.5 Drainback Primary
4.0 Equipment
4.1 Solar Collectors
4.1.1 Solar Collector Terminology
4.1.2 Flat Plate and Tubular Collectors
4.1.3 Collector Certification
4.1.4 Collector Assessment

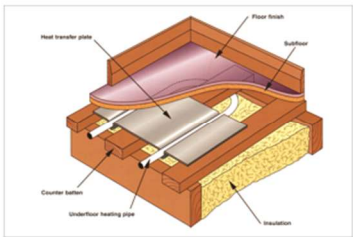
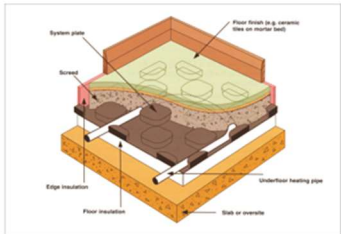


# Underfloor Heating Design Guide



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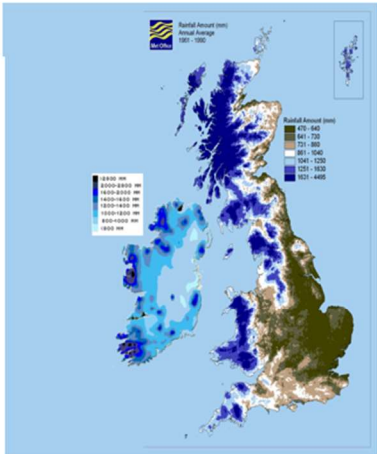


# Rainwater Harvesting Guide



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## Opportunities

### City & Guilds Vacancies

[BECOME AN APPRENTICE](#) [EVENTS AND WEBINARS](#) [CONTACT](#)



# Become an independent end-point assessor



[Home](#) > [Apprenticeships](#) > [Become an IEPA](#)

#### ASSOCIATE VACANCIES

##### Lead and Independent End-Point Assessors

City & Guilds is approved to deliver end-point assessments across a number of Apprenticeship Standards. The LIEPA roles are key to supporting this service.

> [LIEPA vacancies](#)

##### External Quality Assurers

There are a variety of EQA roles to support and promote quality assurance in centres in line with City & Guilds and regulatory arrangements.

> [EQA vacancies](#)

> [Associate document library](#)

##### Moderators

Moderators play a key role in the moderation of our Technical Qualifications for 14-19 year olds. They were designed with employers and providers to deliver the most up-to-date relevant technical skills.

> [Moderator vacancies](#)

##### Examiners

We are recruiting for Examiners in several industry areas for our Technical qualifications.

> [Examiner vacancies](#)

##### Assured Consultants

We are recruiting Consultants across the UK and internationally to support our new Assured recognition service.

> [Assured Consultant vacancies](#)

We have associate vacancies as outlined above. If you are interested in working with us follow the below link to make an application

Interested in working with us? [Follow this link](#)

## Framework funding end dates

We currently have the below end dates for funding on the relevant apprenticeships in England. As this is England only funding the relevant qualifications are likely to be available after this date due to the demand for other nations and full cost recovery/adult delivery.

So, let's look at an example. Qualifications such as 6189 are likely to be available after July 2020 although not funded as an apprenticeship after that date. This will mean the only funded apprenticeship after July 2020 for plumbing will be the new plumbing and domestic heating standard (9189 qualification code).

Framework	Code	SSC	Area	End date
Heating and Ventilating	515	<u>Instructus</u>	Construction, Planning and the Built Environment	31-Jul-20
Plumbing and Heating	512	<u>Instructus</u>	Construction, Planning and the Built Environment	31-Jul-20
Refrigeration and Air Conditioning	514	<u>Instructus</u>	Construction, Planning and the Built Environment	31-Jul-20

## RACHP




Refrigeration air conditioning and heat pump engineering technician Apprenticeship standard -

<https://www.instituteforapprenticeships.org/apprenticeship-standards/refrigeration-air-conditioning-and-heat-pump-engineering-technician/>

Please follow link to on programme qualification resources and learner journal which has now been released-

<https://www.cityandguilds.com/qualifications-and-apprenticeships/building-services-industry/refrigeration-and-airconditioning/6090-refrigeration-airconditioning-and-heat-pump-systems#tab=documents>

## New electrotechnical qualification guidance on exemption

Additional documents			
	5357 Factsheet installation technician maintenance technician pdf	596 KB	24 Jul 2018
	Electrotechnical Assessment Exemption Guidance	239 KB	02 Jan 2019
	Electrotechnical permitted reference materials 2019 v1-5 pdf	252 KB	11 Jan 2019

The document is located on 2357 and 5357 websites as an example see the 5357 website above under additional documents, link below.

**Link to exemption document**

## JIB Registered electrician 1<sup>st</sup> July deadline to update to 18<sup>th</sup> edition

### Apprentices

What's happening?

Completing apprentices with the 17th Edition can become a Registered Electrician until 31 Dec 2018. They will have until 01 July 2019 to gain the 18th edition qualification if they wish to maintain their Registered Electrician status.

From 01 Jan 2019, completing apprentices with 17th will receive an Installation or Maintenance Electrician gold card and can upgrade to Registered Electrician when they gain the 18th.

### New Gold Card Applications

What's happening?

From 01 January 2019 anyone applying for an Installation or Maintenance Electrician gold card for the first time will be required to sign up to Registered Electrician status. This means the applicant must be qualified to the 18th Edition of BS7671 and sign up to a Code of Professional Practice, in addition to holding the minimum qualifications required for the card.

### Existing Registered Electricians

What's happening?

By 01 July 2019 all current Registered Electricians with 17th Edition BS7671 need to have achieved a qualification in the 18th Edition of the Wiring Regulations (BS7671:2018).

## Find out more around 18th Edition IET Wiring Regulations 2018

<https://www.cityandguilds.com/qualifications-and-apprenticeships/building-services-industry/18th-edition>



## New digital credential for IET Wiring Regulations

**Provide greater value to learners and your training through issuing shareable skills.**

City & Guilds in collaboration with Digitalme, have developed a bespoke digital credential for learners upon successful completion of the Level 3 Award in Requirements for Electrical Installations BS7671:2018.

Colleges and training providers delivering the City & Guilds 2382-18 training will now be giving their learners additional value through City & Guilds directly issuing this credential upon completion of their qualification. This complimentary service will be offered to all centres until 31 August 2019.



**What's the benefits of a digital credential?**

- **Safe and secure format, more flexible and trusted than paper**
- **Help learners stand out from the crowd**
- **Tells the story behind the achievement**
- **Verified attainment of learning**

For centres, showcasing access to a digital credential as an additional component of your product offering could increase your appeal as a preferred training provider amongst potential learners and employers. Learners will still be issued a physical certificate; this digital credential is an added benefit.

For more information please follow this link - <https://www.cityandguilds.com/qualifications-and-apprenticeships/building-services-industry/18th-edition/digital-credential>

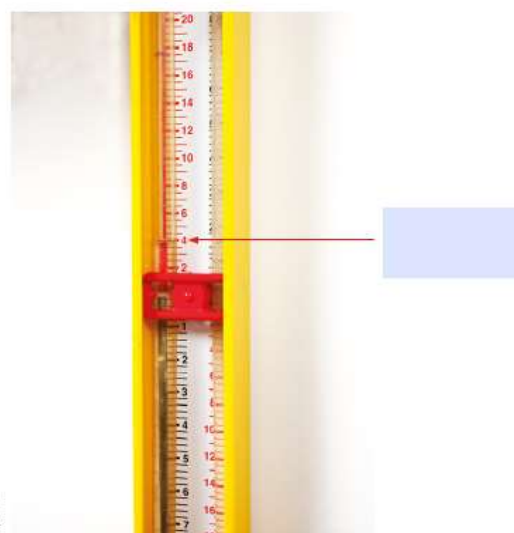


## Level 3 Gas Engineer -9074 Training Manual and SmartScreen

Level 3 gas qualification which provides a suitable entry route on to the gas safe register. This product can be delivered as a stand alone qualification or as part of the new gas engineering apprenticeship. Smartscreen for 9074 has additional presentations coming soon.  
Purchase from Walled Garden – search code - TL081117



### Task G15: (Continued) Operating a U gauge and digital manometer



### Task SC1: (Continued) Gas pipework



Explain what's wrong with this gas pipe installation and what action you would take.

### Task G30: (Continued) Types and measurement of ventilators



What type of ventilation device is this and is it suitable to provide ventilation for a gas appliance?

#### Measuring a ventilator

Show the correct method for measuring ventilator grills.



Ventilator side view



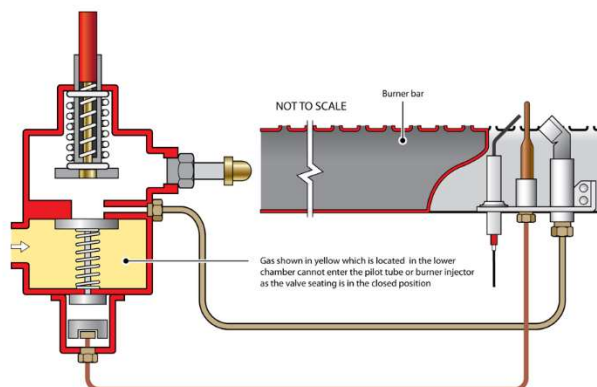
Tapered air brick aperture

## SmartScreen – presentations and sample lesson plans

### Meter inlet valves – Medium pressure installations



Meter Inlet Valve (MIV) used for tightness testing



### Unit 305: Gas Safety Principles

#### Sample lesson plan: Session 11

Course number: \_\_\_\_\_ Course title: Level 3 Diploma in Gas Engineering

Tutor's name: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Lesson length: 3 hours Room: \_\_\_\_\_

Lesson topic: Understand the correct installation locations and types of Emergency Control and Appliance Isolation Valves.

<b>Aims:</b> <ul style="list-style-type: none"> <li>To describe the installation, operation and positioning requirements for Emergency Control Valves (ECV):                             <ol style="list-style-type: none"> <li>gas meter installations</li> <li>remote meter installations</li> <li>multiple occupancy meter installations</li> <li>Meter Inlet Valves (MIV).</li> </ol> </li> </ul>	<b>Learning outcomes:</b> To enable learners to understand: <ul style="list-style-type: none"> <li>How to determine the correct positions for a range of ECVs in a range of circumstances.</li> <li>The operation of ECVs</li> <li>The correct methods when installing ECVs within a variety of situations.</li> </ul>
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Timing (mins)	Work to be covered	Teaching activity/assessment	Learner activity	Resources
60 mins	Tutor to deliver <b>PowerPoint 3: Operation and positioning requirements for Emergency Control Valves (ECV)</b>	Deliver <b>PowerPoint 3</b> to learners, using questioning techniques to engage them.	Note taking during presentation/questioning. Tutor to gain clarification.	<b>PowerPoint 3: Operation and positioning requirements for Emergency Control Valves (ECV)</b>

## New Textbooks



### Book 2 Electrical Installations for 5357, 8202 and 2365 now available for purchase

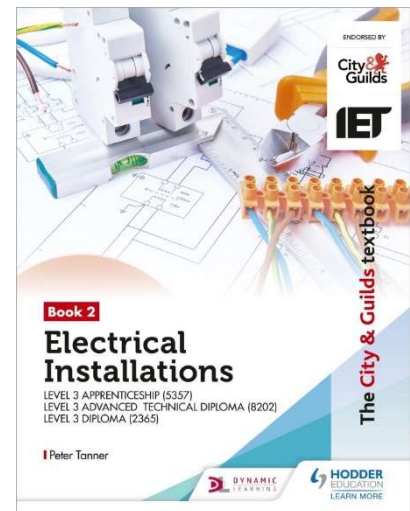
The following textbook, produced in conjunction with Hodder Education and IET, is now available for purchase via Walled Garden.

**Title:** The City & Guilds textbook: Book 2 Electrical Installations for the Level 3 Apprenticeship (5357), Level 3 Advanced Technical Diploma (8202) and Level 3 Diploma (2365)

**ISBN:** 9781510432253

**Product code:** TB247897

[Download the information factsheet](#)



**Discount** - Price of £28.04 on WG includes a 15% discount on the RRP of £32.99.

## Regional Network Meetings and webinars

We have some key webinars and networks especially focused on plumbing and gas centres.

## Plumbing and Domestic Heating standard Launch – Webinar

### City & Guilds Plumbing & Heating Apprenticeship Launch

Mon, Feb 4, 2019 12:30 AM - 1:30 AM GMT  
[Show in My Time Zone](#)

Following the new Apprenticeship standard we will be launching the supporting qualification.  
Run by the Technicals Advisors and Building Services Industry Manager this will be an opportunity to ask questions and gain updates to the new qualification.

\*Required field

First Name*	Last Name*
<input type="text"/>	<input type="text"/>

Email Address\* 128

By clicking this button, you submit your information to the webinar organizer, who will use it to communicate with you regarding this event and their other services.

[Register](#)

With the new long awaited standard due to be live for registrations on the 24<sup>th</sup> January 2019 we are delivering a webinar to introduce the new on programme qualification our 9189 register on the below link.

**Webinar link** - <https://attendee.gotowebinar.com/register/1526550243911913219>

National launch from the NAPT Cranmore Park Conference & Event Centre on the 30<sup>th</sup> Jan, contact [naptnationalcouncil@yahoo.co.uk](mailto:naptnationalcouncil@yahoo.co.uk) for further information

## BSE Regional networks

Focussed on Plumbing and Gas with the developments in the apprenticeship market, we hope to keep our networks updated by our latest series of autumn, winter network meetings.

This network meetings with be delivered by a City & Guilds Technical Advisor and cover trailblazers, standards, technicals, T levels and more.

We will be hosting networks to discuss the plumbing and gas qualifications and apprenticeships throughout the new year, all we need is a room we do the rest just contact us for more information or if you would like to host.

[buildingservices@cityandguilds.com](mailto:buildingservices@cityandguilds.com)

## BSE Regional networks

Still time to catch one of our popular networks!

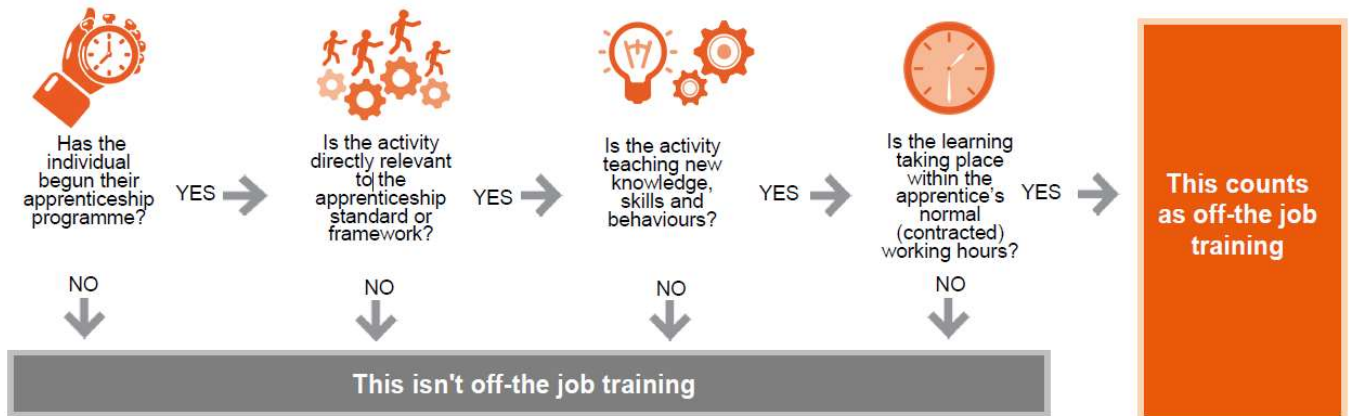
North East	Newcastle College	22.1.19	<a href="https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-gas-newcastle-college-tickets-50650652465">https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-gas-newcastle-college-tickets-50650652465</a>
Midlands	SCCB Birmingham	24.01.19	<a href="https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-sccb-birmingham-tickets-52707045191">https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-sccb-birmingham-tickets-52707045191</a>
South East	CCN Norwich	25.01.19	<a href="https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-gas-city-college-norwich-tickets-52871769887">https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-gas-city-college-norwich-tickets-52871769887</a>
South East	Mid Kent	13.02.19	<a href="https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-gas-mid-kent-college-tickets-48876786785">https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-gas-mid-kent-college-tickets-48876786785</a>
North East	Hartlepool College	7.2.19	<a href="https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-gas-hartlepool-college-tickets-50271681954">https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-gas-hartlepool-college-tickets-50271681954</a>
Northern Ireland	Belfast	13.2.19	<a href="https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-gas-northern-ireland-tickets-54751825183">https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-gas-northern-ireland-tickets-54751825183</a>
Northern Ireland - Electrical	Belfast	14.2.19	<a href="https://www.eventbrite.co.uk/e/bse-regional-network-electrical-northern-ireland-tickets-54751893387">https://www.eventbrite.co.uk/e/bse-regional-network-electrical-northern-ireland-tickets-54751893387</a>
South West London	Chichester	28.2.19	<a href="https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-gas-chichester-tickets-53732205473">https://www.eventbrite.co.uk/e/bse-regional-network-plumbing-and-gas-chichester-tickets-53732205473</a>
Wales	TBC	TBC	TBC

<https://www.eventbrite.co.uk/o/city-and-guilds-building-services-team-17431621136>

Any new dates will show on the above link, see you soon.

## Off the job training guidance

### Off-the-job training: steps to help you determine whether an activity counts as off-the-job training



#### Key facts

1

Off-the-job training must make up at least 20% of the apprentice's contracted hours, over the total duration of the apprentice's planned training period.

2

Off-the job training can be delivered in the apprentice's normal workplace or at an external location.

3

Progress reviews and on-programme assessments do not count towards 20% off-the-job training, as they do not deliver new knowledge, skills and behaviours.

4

If needed, English and maths training must be on top of the 20% off-the-job training requirement.

**Brought to you by**  
**National**  
**Apprenticeship**  
**Service**

You can find further details about off-the-job training including best practice examples in the [apprenticeship funding rules](#) and the [apprenticeships: off-the-job training](#) guidance on GOV.UK.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/769721/Off-the-job\\_training\\_FLOWCHART.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/769721/Off-the-job_training_FLOWCHART.pdf)

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/621565/OTJ\\_training\\_guidance.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/621565/OTJ_training_guidance.pdf)



## CPD Events

Please contact [advance@cityandguilds.com](mailto:advance@cityandguilds.com) for further details

## CPD EVENTS – What's coming up?



A City & Guilds Group Collaboration

**External Quality Assurance – EQA (2 day workshop)** - A workshop that provided knowledge, understanding and practical opportunities to explore what an external quality assessor does to monitor a centre approved to deliver qualifications. Delegates considered the fundamental aspects of the EQA role as well as how they maintain good practice in relation to legislative and regulatory requirements. This provided the opportunity to learn, practice and carry out valuable activities which reflect the EQA role.

7<sup>th</sup> February – London

### Preparing your apprentice for End Point Assessment (EPA)

This one day workshop style session is an opportunity to keep ahead of assessment developments following the latest guidelines from Regulators and City & Guilds. This session is designed to be a highly interactive experience for Assessors to reflect, share best practice and collect practical tips and guidance from our expert facilitator

7<sup>th</sup> March Wakefield

18<sup>th</sup> June London

### Best practice in the quality assurance for the new Apprenticeship Standards (England)

A workshop full of engaging activities which allowed those attending to reflect on their current quality assurance practices in apprenticeship delivery and highlight areas of further development in their strategies when working with employers and apprentices

30<sup>th</sup> May – Warrington

10<sup>th</sup> June - Taunton

### Best Practice in preparing apprentices for EPA professional discussion or interview

A workshop filled with engaging practical and other activities, aims to provide ideas for further developing your individual and centre practice when working with new apprentices in preparing them for their EPA professional discussion or interview.

22<sup>nd</sup> January – Warrington

29<sup>th</sup> January – London

7<sup>th</sup> February – Wakefield

11<sup>th</sup> February - Taunton

### Teaching & Learning English & Maths

How to understanding English criteria to develop achievable learning aims

2<sup>nd</sup> April London

How to make the most of digital tools in English teaching

3<sup>rd</sup> April London

How to master problem solving in the English class

How to boost your confidence and develop your English skills

How to Teach Maths & English Together – How to Support Learners with the Language of Maths

15<sup>th</sup> May London

2<sup>nd</sup> July London

10<sup>th</sup> July Burntwood

### Leadership & Management

Project Management

20<sup>th</sup> February – Warrington

Leadership in an FE context

30<sup>th</sup> January – Warrington

Finance & Curriculum Drivers

5<sup>th</sup> March - Warrington

Issued date January 2019

All above courses are available as a bespoke in-house event. Please contact [advance@cityandguilds.com](mailto:advance@cityandguilds.com) for further information

## Tell us what you think

*All About Building Services* is a newsletter that brings together all of the key developments from City & Guilds relevant skills learning across England, Scotland Northern Ireland and Wales. It contains updates on the range of teaching and learning resources we offer, plus relevant public policy or other information we think you might be interested in.

Each edition is numbered, so we can refer back to previous issues or tell you when information has been superseded. If there's anything else you'd particularly like us to cover or explain more fully in future issues of *All About*, please feel free to drop us a line to

For specific queries and enquiries please contact our dedicated customer support team:

**PDCustomerSupport@cityandguilds.com**

Thank you for your continued support.
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