



# UNITED KINGDOM WEIGHING FEDERATION METROLOGY CERTIFICATE AND METROLOGY APPRENTICESHIP DIPLOMA

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## ABOUT THIS DOCUMENT

This document is intended to scope both the UKWF Metrology Certificate and UKWF Metrology Apprenticeship Diploma training courses.

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## UKWF METROLOGY CERTIFICATE

### UKWF METROLOGY CERTIFICATE COURSE RESTRICTIONS

Any UKWF member employee is eligible for this training course. No prior knowledge of the weighing industry is required for this training course, but obviously any previous experience may benefit the delegate.

### STRUCTURE OF THE UKWF METROLOGY CERTIFICATE TRAINING COURSE

This course will be run over 5 contiguous days, Monday to Friday. Training content will include:

1. Introduction to metrology- This will consider what is metrology and distinguish between legal metrology, scientific metrology, and industrial metrology. It will outline the role a UKWF businesses would have in each of these field and the responsibilities to customers in these field - It would include focus on the importance of legal metrology for business and the benefits that their correct and legal implementation can bring.
2. Safety- This will cover the obligations of Health and Safety legislation that apprentices would need to work with. This would include introductions to, Working at Heights, Confined Spaces, Manual Handling, Display Screen Equipment, PPE Requirements – It will include some understanding of risk assessments in health and safety
3. A General Introduction to Maths for Weighing; - Calculating errors on weighing instruments, introductory statistics, calibration of weights (uncertainty and error), Gravity, this will include some exercises and worked example for cohorts to gain experience

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4. Metrology and Infrastructure-Metrology infrastructure for UKWF members: OIML, EU harmonised standards, UK designated standards, WELMEC Guides, UK Government Guidance. Local Weights and Measures Authorities and “Self-verification” and why UKWF companies need to interact with these organisations.
5. Quality Management- Understanding of ISO 9001-2015 in your business and why it is necessary. Relationship with the responsibilities of self-verification. UKWF Codes of practice and why they are important.
6. Understanding the operation of a weighing instrument- Introduction to the modular approach for weighing instruments and an understanding of the certification that relates to this. An understanding of the functions of the different modules in a weighing instrument, Compatibility of modules.
7. Verification and reverification of weighing instruments – This must include non-automatic and automatic weighing instruments and the designated standards that cover this. It must clearly distinguish calibration and verification. Distinguish between initial verification and re-qualification - This will also include the UKWF Code of Practice and will cover both automatic and non-automatic weighing instruments.
8. Fault finding on weighing Instruments - This will focus on how an engineer can understand why an instrument may not be functioning and how this can be resolved This should be practical and based on a workshop environment and must be “in-person” training (this is not available as part of on-line training)
9. The role and importance of software in weighing - This will be an introduction to the legislative frameworks that relate to software in weighing instruments and the trends for the future so that the delegates are aware of the present technology and what will be on the market.
10. Course content recap and Exam Questions – this will be a very high-level recap of the modules followed by some simple exam questions. Minimum pass rate of 60% is required.

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Module 8 will be delivered by Jeremy Sage and all other modules will be delivered by Ian Turner.

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## UKWF METROLOGY CERTIFICATE TRAINING COURSE PRICING PER DELEGATE

The pricing below is per delegate:

On-Line Training:

£ 495 per course (per Delegate)  
(This equates to £99 per day, per delegate)

In-Person Training:

- Cognition Head Quarters, St Albans, Hertfordshire  
£ 695 per course (per Delegate)  
(This equates to £139 per day, per delegate)
- Elsewhere within the UK  
£ TBD per course (per Delegate)  
(This equates to £TBD per day, per delegate)

Notes:

- All travel, hotel, personal expenses, etc. for the delegates are excluded from the prices above and the member company will need to separately pay these costs
- For In-Person delegates, refreshments and a light lunch is included within the pricing above

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- The trainers are both located near the Cognition Headquarters. Training held at Cognition will not require any travelling, hotel, etc. expenses for the Trainers and we are therefore able to accurately define the costs of delivering the training.
- Training in other areas will be possible (assuming we achieve the 10 in-person delegates minimum) but it will also be more expensive when training is held elsewhere because of the incremental costs highlighted above.
- We will look at pricing alternative locations downstream.
- We may decide to change the pricing above once we have run the first training course

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## UKWF CERTIFICATE TRAINING COURSE – MAXIMUM NUMBER OF DELEGATES

In-Person Training – Maximum of 10 delegates per training module

On-Line Training – Maximum of 20 delegates per training module

Note that On-Line training will be performed in parallel with In-Person training (i.e., the trainer will be teaching the In-Person students and via Teams, the On-Line students will remotely join that training).

Also note that there must be a minimum of 8 delegates per training course.

Any cancellations within 30 days of the training date will result in the full cost being invoiced to the member company unless a replacement delegate can be found.

## NOTE ON FUNDING

The UKWF is not an accredited training provider. Despite this, local funding may be available, and we recommend that you contact your local Skills 4 Growth council department and your local growth hub.

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## UKWF APPRENTICE METROLOGY DIPLOMA

### UKWF APPRENTICE METROLOGY DIPLOMA COURSE RESTRICTIONS AND CRITERIA

This course is open to any UKWF member employee who is enrolled on a certified Apprenticeship scheme in a “relevant” subject.

The UKWF Apprentice Metrology Diploma consists of:

1. The relevant certified Apprenticeship Scheme
2. The UKWF Metrology training

If the candidate completes both above successfully, they will be awarded the “UKWF Apprentice Metrology Diploma”.

This accolade, whilst not a “formal” training award, this will be recognised by all UKWF members within the industry.

This Apprentice Metrology Diploma is targeted specifically at Service Field Technicians/Engineers.

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## STRUCTURE OF THE UKWF APPRENTICE METROLOGY DIPLOMA TRAINING COURSE

This course will be run over 15 days, broken into 3 training sessions of 5 days each. Each session will be performed over a Monday to Friday period. Training content will include:

1. Introduction to metrology- This will consider what is metrology and distinguish between legal metrology, scientific metrology, and industrial metrology. It will outline the role a UKWF businesses would have in each of these field and the responsibilities to customers in these field - It would include focus on the importance of legal metrology for business and the benefits that their correct and legal implementation can bring.
2. Safety- This will cover the obligations of Health and Safety legislation that apprentices would need to work with. This would include introductions to, Working at Heights, Confined Spaces, Manual Handling, Display Screen Equipment, PPE Requirements – It will include some understanding of risk assessments in health and safety
3. A General Introduction to Maths for Weighing; - Calculating errors on weighing instruments, introductory statistics, calibration of weights (uncertainty and error), Gravity, this will include some exercises and worked example for cohorts to gain experience
4. Metrology and Infrastructure-Metrology infrastructure for UKWF members: OIML, EU harmonised standards, UK designated standards, WELMEC Guides, UK Government Guidance. Local Weights and Measures Authorities and “Self-verification” and why UKWF companies need to interact with these organisations.
5. Quality Management- Understanding of ISO 9001-2015 in your business and why it is necessary. Relationship with the responsibilities of self-verification. UKWF Codes of practice and why they are important.
6. Understanding the operation of a weighing instrument- Introduction to the modular approach for weighing instruments and an understanding of the certification that relates to this. An understanding of the functions of the different modules in a weighing instrument, Compatibility of modules.

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7. Verification and reverification of weighing instruments – This must include non-automatic and automatic weighing instruments and the designated standards that cover this. It must clearly distinguish calibration and verification. Distinguish between initial verification and re-qualification - This will also include the UKWF Code of Practice and will cover both automatic and non-automatic weighing instruments.
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9. The role and importance of software in weighing - This will be an introduction to the legislative frameworks that relate to software in weighing instruments and the trends for the future so that the delegates are aware of the present technology and what will be on the market.
10. Course content recap and Exam Questions – this will be a very high-level recap of the modules followed by some difficult exam questions. Minimum pass rate of 80% is required.

Module 8 will be delivered by Jeremy Sage and all other modules will be delivered by Ian Turner.

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## UKWF APPRENTICE METROLOGY DIPLOMA TRAINING COURSE PRICING PER DELEGATE

The pricing below is per delegate:

On-Line Training:

£ 1,295 per course (per Delegate)

(This equates to £86 per day, per delegate)

In-Person Training:

- Cognition Head Quarters, St Albans, Hertfordshire  
£ 1,995 per course (per Delegate)  
(This equates to £133 per day, per delegate)
- Elsewhere within the UK  
£ TBD per course (per Delegate)  
(This equates to £TBD per day, per delegate)

Notes:

- All travel, hotel, personal expenses, etc. for the delegates are excluded from the prices above and the member company will need to separately pay these costs
- For In-Person delegates, refreshments and a light lunch is included within the pricing above
- The trainers are both located near the Cognition Headquarters. Training held at Cognition will not require any travelling, hotel, etc. expenses for the Trainers and we are therefore able to accurately define the costs of delivering the training.

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On-Line Training – Maximum of 20 delegates per training module

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