Garnet
Garnet Global Training Center

GGT-MT-101

Metrology, Calibration & Testing

Metrology Fundamentals

أساسيات علم القياس

Duration	Language	Formats	Hours	Level
5 or 10 days	**English or Arabic**	**Classroom, online, in-house**	**35 / 70**	**Foundation**

Overview

This course builds a solid base in Metrology Fundamentals, starting from first principles and moving quickly to the everyday tasks participants meet at work. Accurate measurement, calibration and laboratory competence for industry and regulators. You can join a public session in one of 20 cities or live online, in English or Arabic, or bring the course in-house with examples from your own operations.

What you will be able to do

- Explain the key concepts, terms and standards of Metrology Fundamentals.
- Communicate confidently with specialists and colleagues.
- Plan the next steps in your own learning.
- Recognise the main hazards, errors and misconceptions newcomers face.
- Carry out basic tasks correctly using simple checklists and tools.

Who should attend

Calibration and test lab staff, quality engineers, instrument technicians and lab managers. No prior experience is required; it also suits new hires, graduates and staff moving into this field.

Key topics

- Measurement principles
- Traceability and standards
- Uncertainty
- Calibration procedures
- ISO/IEC 17025 requirements
- Proficiency testing

Formats and fees

5-day classroom	**USD 4,750**
5-day online	**USD 2,950**
10-day classroom	**USD 8,950**
10-day online	**USD 5,450**
In-house	**Quotation per group**

Fees per participant, excluding VAT.

Register or ask

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Email: info@garnettrainings.com

Training: training@garnettrainings.com

Web: garnettrainings.com

Sharjah Publishing City Free Zone, Sharjah, UAE

Certificate

Participants who attend at least 90% of sessions and complete the final assessment receive a certificate of completion stating 35 contact hours (5-day) or 70 contact hours (10-day).

5-day outline

Day 1 Introduction to Metrology Fundamentals
- Measurement principles
- Checklists and templates to take away

Day 2 Core concepts and terminology
- Traceability and standards
- Uncertainty

Day 3 Basic methods and tools
- Calibration procedures
- Group discussion and peer review

Day 4 Working safely and correctly
- ISO/IEC 17025 requirements
- Measurement and reporting

Day 5 Practical exercises and review
- Proficiency testing
- Hands-on workshop on a workplace challenge

10-day outline

Day 1 Introduction to Metrology Fundamentals
- Measurement principles
- Checklists and templates to take away

Day 2 Core concepts and terminology
- Traceability and standards
- Uncertainty

Day 3 Basic methods and tools
- Calibration procedures
- Group discussion and peer review

Day 4 Working safely and correctly
- ISO/IEC 17025 requirements
- Measurement and reporting

Day 5 Practical exercises and review
- Proficiency testing
- Hands-on workshop on a workplace challenge

Day 6 Advanced techniques and specialist practice
- Complex cases in depth
- Common mistakes and how to avoid them

Day 7 Digital tools, data and automation
- Analysis tools and software
- Using AI in this field

Day 8 Benchmarking against international practice
- Global performance benchmarks
- Regional and international case studies

Day 9 Capstone project
- Analyse a real challenge from your organisation
- Build the solution and implementation plan

Day 10 Presentations, final assessment and certificates
- Project presentations and review
- Final exam and certificate award

Schedule 2027–2030

Dates	Format	City	Language	Fee (USD)
3–7 Jan 2027	5-day classroom	Cairo	Arabic	4,750
4–8 Apr 2027	5-day classroom	Kuwait City	English	4,750
3–14 May 2027	10-day classroom	Barcelona	English	8,950
12–16 Jul 2027	5-day online	Live online	Arabic	2,950
10–14 Jan 2028	5-day classroom	Istanbul	English	4,750
13–17 Feb 2028	5-day classroom	Kuwait City	English	4,750
16–27 Oct 2028	10-day online	Live online	English	5,450
11–22 Dec 2028	10-day classroom	Paris	English	8,950
5–9 Feb 2029	5-day classroom	Paris	English	4,750
9–13 Jul 2029	5-day online	Live online	Arabic	2,950

Dates	Format	City	Language	Fee (USD)
17–21 Sep 2029	5-day classroom	Abu Dhabi	English	4,750
18–29 Nov 2029	10-day classroom	Amman	Arabic	8,950
17–28 Feb 2030	10-day classroom	Muscat	English	8,950
8–19 Apr 2030	10-day online	Live online	English	5,450
12–16 May 2030	5-day classroom	Riyadh	Arabic	4,750
16–20 Jun 2030	5-day classroom	Cairo	Arabic	4,750

Customised and in-house versions of this course are available on request. garnettrainings.com/en/customise/