



Measurement System Analysis

>> log-on to virtual learning

3 part programme: Sept 9th, 14th, 17th



> blended programme

> practical & interactive

> accreditation pathway

MSA is a key tool for achieving Zero Defects ...

Measurement System Analysis is critical to ensuring process control and quality, and is the essential foundation for process improvement. This practical course will enable delegates to assess the performance of new and existing measurement systems, and consider how improvements can be introduced when they are found to be necessary.

Training specifically designed for virtual learning

Built on our reputation and track record for training excellence, this new virtual programme blends together the most powerful components of effective and impactful learning within a structured pathway for achieving assessed and accredited levels of expertise and skill. With additional elements of individual support and coaching, we provide participants with an enhanced learning experience that offers even more value than classic classroom training – and all without the hassle of travelling and ancillary expenses.

“This was a great course, with a good mix of theory, formulae and application.”

“Very engaging and inspiring. I look forward to practising the skills in my workplace.”

“A very good course! Good balance between theory and practice. The session was hands-on and directly useable.”

“A comprehensive course, which focused on what we can use in real studies.”



Masterclass Webinars

Live training via Zoom mimics the 'in-class' format to optimise interaction & dialogue.



Virtual = even more Value

Shorter & more frequent sessions enhance knowledge retention. Learners are 'in the zone' without distractions



Embedding the Knowledge

Self study e-learning modules supplement the live webinars. Short revision quizzes check knowledge & aid learning



Digital Training Materials

Available in digital format for faster reference.



Qualification Pathway

Industry standard accreditation process is rigorous to ensure quality outputs and accreditation standards

Fees

- Cost per participant is 440 GBP +VAT or local taxes as applicable.

The training is **virtual** the benefits are **real**

Training Objectives:

- Demonstrate why measurement is important and what can be done to improve a measurement system.
- Understand how to conduct a measurement system analysis for continuous and attribute data.
- Focus on how to interpret the results of measurement studies to make improvements to the measurement system.
- Understand the links between measurement system analysis and additional quality tools.

Preparatory e-Learning

Delegates are provided with short e-learning preparatory materials to complete:

- Basic Statistics: Describing Data
- Introduction to MSA & Minitab

Masterclass Webinars - Programme of Content

Introduction to Measurement System Analysis

- Measurement uncertainty and effect on product and process decisions
- The uses for measurement studies
- Alternative sources of measurement error & how to overcome them
- Preventative maintenance considerations
- Calibration; equipment resolution; environmental requirements
- Basic capability charts and equipment selection
- Linking MSA to additional quality tools

Types of Measurement Studies

- Introduction to the different types of measurement studies & data
- Common vs. special causes of error
- Value vs feasibility of collecting data

Location Variation

- Types of studies available: bias, stability, linearity
- Interpreting the results

Continuous Data Studies – Type I Studies

- Uses for Type I studies
- Setting up the study & interpreting the results
- Capability indices (Cg, Cgk)

Continuous Data studies – Gauge R&R

- Repeatability and reproducibility
- Types of studies available (Average and Range vs ANOVA)
- Interpreting discrimination
- Destructive measurement systems
- Conditions that need to be considered
- Re-evaluating the measurement system

Attribute Data Studies

- Introduction to attribute MSA
- Uses for attribute studies
- Setting up the study
- Interpreting the results
- Human factors influencing attribute studies

Virtual
Masterclasses



Self Study
e-Learning



Online
Knowledge
Tests



Masterclass Dates, Times & Technology

- There are 3x interactive training modules (each being 3.5 hours in duration), incorporating multi-media features and delivered by masterclass trainers.
- Additionally, offline case study work and post-training online knowledge test are included.
- Following enrolment, participants will be issued with Zoom invites in readiness to log-on to the masterclass webinar modules.

Masterclass Part 1 Wednesday Sept 9 th 2020 06:00 – 09:30 (UTC) <u>or</u> 14:00 – 17:30 (UTC)	Masterclass Part 2 Monday Sept 14 th 2020 06:00 – 09:30 (UTC) <u>or</u> 14:00 – 17:30 (UTC)	Masterclass Part 3 Thursday Sept 17 th 2020 06:00 – 09:30 (UTC) <u>or</u> 14:00 – 17:30 (UTC)				
Time Zone Converter						
<ul style="list-style-type: none"> • Due to time zone differences, each module is delivered twice: firstly at 06:00 UTC, and then repeated at 14:00 UTC. This ensures that participants from America, Europe & APAC have opportunity to attend. • Please find below a time zone converter for a selection of time zones. 						
Time Zone >	BST (London)	CET (Paris)	SGT (Singapore)	CST (Shanghai)	EDT (Washington)	PDT (Los Angeles)
Start Time > (Local Time)	07:00 or 15:00	08:00 <u>or</u> 16:00	14:00	14:00	10:00	07:00

How to Book

- Please email Smallpeice on train@smallpeice.com with details of places required, plus your time zone
- Our Booking team will then contact you to arrange payment via credit card or invoice.
- You will then be issued with:
 - Joining instructions & preparation reading
 - Invites to join the Masterclass Webinar

Course Fee

Cost per participant is 440 GBP + VAT or local taxes as applicable.

Department & division-based virtual training

- Our virtual programmes can be delivered exclusively for your company, This provides cost effective group training options for participants who are not co-located, and enables those from different divisions and even regions to be trained together.
- Please email Smallpeice at train@smallpeice.com to request a call back to discuss this option.

Email: train@smallpeice.com





For Our Full Virtual Learning Curriculum

Email: train@smallpeice.com

Smallpeice Enterprises
T: +44 (0)1926 336423
E: train@smallpeice.com
W: www.smallpeice.com

> 8D Problem Solving

> SABRe Essentials

> Process FMEA

> Process Control

> Lean Sigma Yellow Belt

> Lean Sigma Green Belt

> Lean Sigma Black Belt